

Dieci Workshop Manual



Axle

Central driveline services—Clark Hurst axles—01773 605444 for axle info.

Brakes- ATF oil reservoir in cab

Cable handbrake - adjust on top of axle at cable as well as in the cab at the handle mechanism. There is a 1.75mm clearance setting on top of axle behind the lever that is connected to the cable. This is to allow the proper play in the brake discs and to not let the park brake drag when not in use.

Brakes

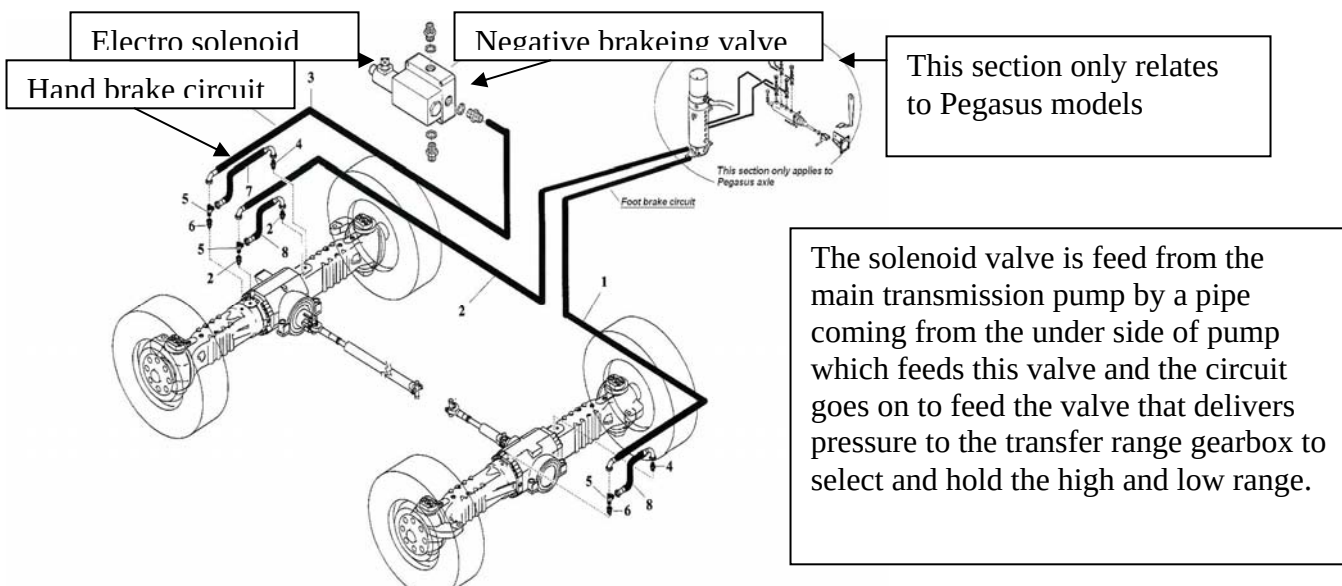
The brakes are mounted in the centre of the axle housing and have an inspection bung in the housing so as you can see the wear on the plates not easily due to confined space. There is a clearance setting for the brake disc's of 2mm? between the brake disc's. The brakes are fed from the master cyl. Behind the guard, under the right hand window, by 2 pipes 1 to the front and 1 to the rear. These pipes tee of to each side of the axle at the top of the each axle it is possible to isolate each brake.

Negative Braking

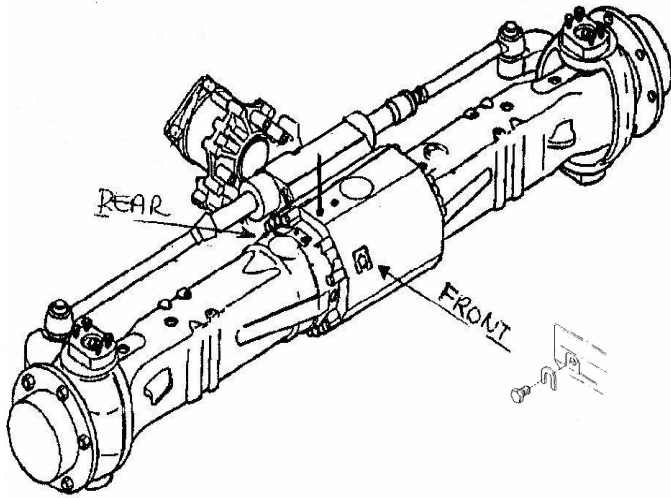
The park brake works of the hydraulic pump on the rear of the engine. It operates by a switch on the dash that opens a solenoid valve mounted on a cross member behind the transmission. This solenoid valve is live all the time while the handbrake is in the off position. When the switch in the dash is switched on the power to the solenoid is broken and the valve allows the pressure going through to the brakes in the front axle to be diverted. Thus pressure holds the hand brake off and no pressure puts the hand brake on. The hand brake only operates on the front axle. It is only controlled by the switch on the dash, it is not operated by the inching pedal which when depressed brakes the drive train through the transmission, when you put the forward reverse lever into neutral it also brakes through the transmission. Switching the ignition off will apply the hand brake.

The most likely area of trouble would be the solenoid block that controls the direction of the pressure. This valve is easily found by following the pipe from the top of the front axle (there are 2 feed pipes going to the front axle one will be for the foot brake working under foot applied pressure the other will be the hand brake working under hydraulic pressure to keep the hand brake off) follow this pipe back to where it goes into a solenoid block and check the electro solenoid on top with the ignition on and hand brake switch off there should be power to the solenoid magnetising the valve spool. With the hand brake switch on there should be no power to this solenoid and valve spool should not be magnetised. It is possible for the valve to be stuck in the valve block not allowing it to operate, as it should. Remove the electric unit part and take out the valve and check for contamination. You can check if valve is working by putting valve into electric unit and applying power though the circuit this way you can see the valve opening and closing.

Any problems with the axle it self ring Clark-Hurst as they hold the warranty on all the axles and are more likely to change an axle rather than work at it. The contact name is Stephen Newman (product support engineer) Ph. 01279 417247 fax 01279 416140 Mobile 07764 254425 email steve.newman@dana.com



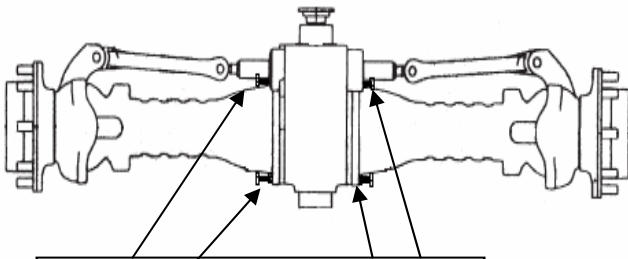
Dedalus Axle with Negative braking



Dedalus brakes only operate on front axle. To release brakes for towing. Prop wheels to stop them rolling. Remove bung from front and one from the rear and take out spacer. Replace bungs fully. **There will now be no brakes on machine.**

It will also be necessary to engage neutral in the range box. Beside the range box there is a valve lever. Turn this lever 90 degrees to dump any oil pressure going to selector valve. With the selector rail that protrudes from range box select neutral. This will show on the dash when the range gear selected (green A light) indicator is off.

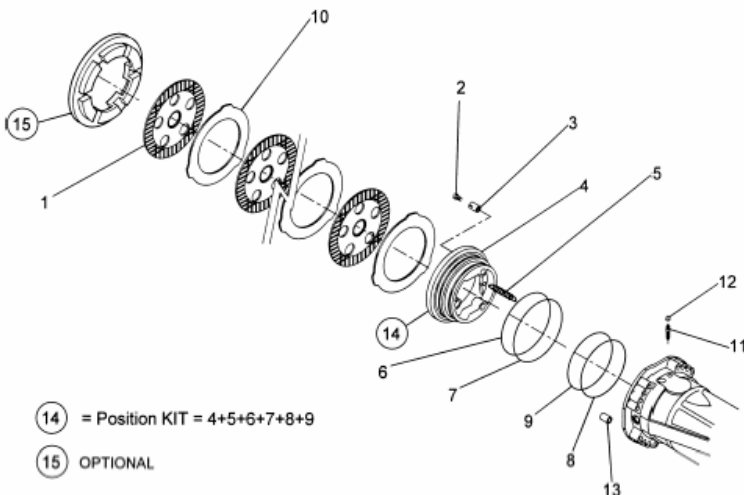
Icarus, Samson Negative Braking



Screws in these positions

To release the brakes for towing on these machines there are 4 screws in the position shown that have to be screwed in to depress the negative diaphragm spring that clamps the brake disc's together. This will release the handbrake but will not affect the foot brake. Again for towing it will be necessary to engage neutral in the range box as described above.

Mark the original position of the screws by counting the number of turns needed to tighten in the screws, as these need to be the same for returning the hand brake to its working state again.



Brakes are mounted in the centre part of axle and are the standard type oil immersed plates clamped via a piston. Piston is moved by oil from master cylinder which is hydraulically assisted at the master cylinder. The piston has back up o rings for added sealing effect.

The natural play between plates with brakes off is 1.3 mm.

Brake plates can be seen via the level bung.

On Negative braking the brakes are held off by hyd pressure until the handbrake is applied.

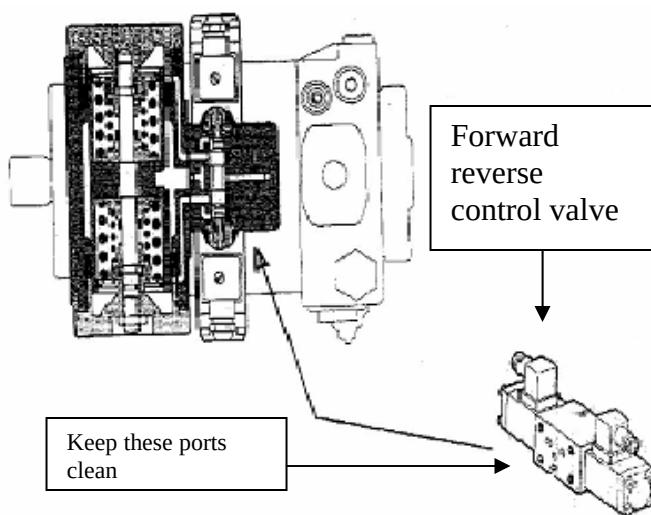
Twist grip on forward reverse lever

This lever is only operative if the machine does not have a turbo fitted. The non turbo machines sold to UK Forks only, are the smaller 7-9 meter machines and have this half gear facility on the twist grip.

Problems encountered so far are the fuse FU10B (old cab) blowing when you twist the grip. In the turbo machines the wiring going to transfer or range gearbox behind the front axle is taped up just above handle to turn off valve for towing the machine on the road. It is a small black connector block and in it there is a diode bridging 2 connections. Cut this diode out to relieve the problem. Alternatively you can lift the control panel on the right hand side of dash the one with the jacklegs switches, cut and isolate the brown and white wire in connector no. X4. This is the power feed wire to the twist grip. Machines that have not got a turbo fitted will have the half gear function working. This works through the transfer or range gearbox via electric solenoid adjusting the angle of the swash plate in the motor to a predetermined position. In the turbo fitted machines there is power enough in the engine to operate an automatic speed selection controlled via hydraulic pressure valve fitted instead of the electric solenoid valve. It works on hydraulic pressure rising from the main transmission pump. As the pressure rises the motor turns to drive the axle and as the speed increases the swash plate changes angle automatically to give even more speed.

Forward reverse lever

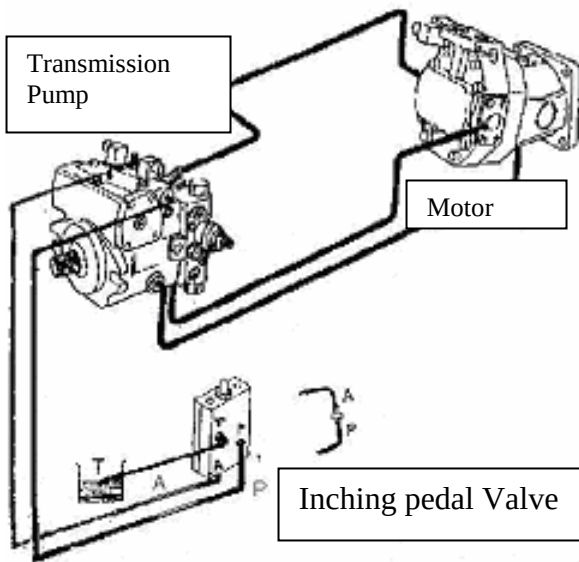
The forward reverse lever controls a solenoid on the main transmission pump to control the direction of oil flow to determine forward/reverse drive. The solenoid is the only one on the main transmission pump and is situated on the side in a vertical position as shown below.



The sensor in the seat cushion and the sensor on handbrake lever interrupt power for the solenoid. The inching pedal does not break the electric power to the lever but does dump the oil going through the pump thus disengaging the drive and also applying the brakes via the negative braking system on machines that have it and by causing a back pressure in the drive motor fitted behind transfer range gearbox. It is important to keep oil clean as the ports between solenoid valve and pump have a small restriction hole which can block and cause loss of drive power.

Hand Brake Lever

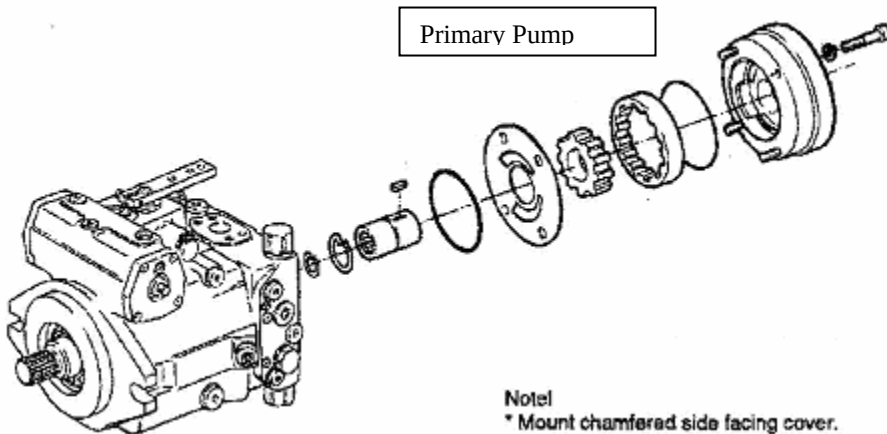
On the handbrake lever there is a sensor switch that creates 2 circuits one when h/brake off and one when h/brake on. Wires to the plug are Grey/red (live) Orange/white (drive) and Blue/black (park light). This has power only if you are sitting in the seat to activate sensor switch in seat. With the h/brake is off you have a circuit through Grey/red to Orange/white. When h/brake is on you have circuit through Grey/red and Blue/black. Wires on the cab side are Orange grey and blue wires from sensor are blue brown and black. (connecting grey to orange should bypass sensor when seated in seat) Joining the 2 seat wires will bypass seat sensor.



Hydrostatic Drive system

Transmission pump fitted on rear of engine with the hydraulic pump fitted on rear of this. Transmission pump is feed by transmission filter in front of cab with CL46 hydraulic oil. This in turn feeds oil under pressure (max 420 bar) to the drive motor fitted behind front axle on range gearbox. The direction of the oil in the 2 high pressure hoses is determined by the forward reverse valve. Over all control of flow is regulated by the Inching pedal valve fitted above inching pedal in the cab. This valve when opened by depressing pedal dumps the flow of oil to the motor thereby giving control of movement to the pedal depending how far you depress the pedal. This operation is not dependant on the revs of the engine as you have control at idle revs and full revs allowing fast hydraulic movement and slow drive motion. It is possible to do away with inching pedal by joining pipes 'A' and 'P' together to form a circuit. There are test points on both pump and motor for running tests to check pressures. The third pipe going to the motor is the pilot pressure (24-27 bar) this controls the swash plate for automatic speed increase or decrease on machines with turbo fitted engines or the solenoid controlled hi / low gear on twist grip.

There are 2 pipes (not shown on diagram) that go to the control valve on the motor it is important that these if removed go back in the right position. If fitted wrong they will give the symptoms of no drive power and when you lift your foot of the accelerator it will give you the feeling that the brakes have been applied. These pipes control the automatic stepless speed change while driving.



The primary pump is situated in the rear of the main pump and it is the primary pump that circulates the oil from hydraulic tank to pump. The job of the primary pump is to keep oil in the main circuit of main pump to motor but does not replace oil in this main circuit on to it is needed through natural loss. The oil in the main circuit stays in this circuit continually so when changing hydraulic oil it is necessary to drain both pump and motor separately so as put fresh clean oil in the system. The primary pump also supplies pressure for the low-pressure valves operations.

Checking Inching Pedal

Check inching pedal in cab Test pressures by fitting tee piece at pipe on pump at position 5 between the two electro valves. With the pedal up and engine idling there should be 20 bar, depress the pedal gradually and pressure should decrease progressively to 0 bar.

Test calibration of pump to motor

Fit clock to position 4 and position 7 Test machine warm and in high range at full speed pump pressure should be 200-250 bar the motor should be mirroring the same pressures. Hold the revs on and apply the brakes hard the pump pressure should rise to 420 and the motor pressure drop to 0. Adjust position 8 to calibrate.

Diagram

Position 2, pilot pressure 24-27 bar (engine idle and in neutral) 14mm coarse tread test point

Position 4, forward 400-420 bar. (in gear, brake on, high range and full revs 2500 rpm)

Position 4a, reverse (same procedure) 12mm coarse tread test point

Position 5, Adjusting screw for high pressure, normally set at 420 bar can be increased to 440 bar [test at position 4 forward or 4A reverse]

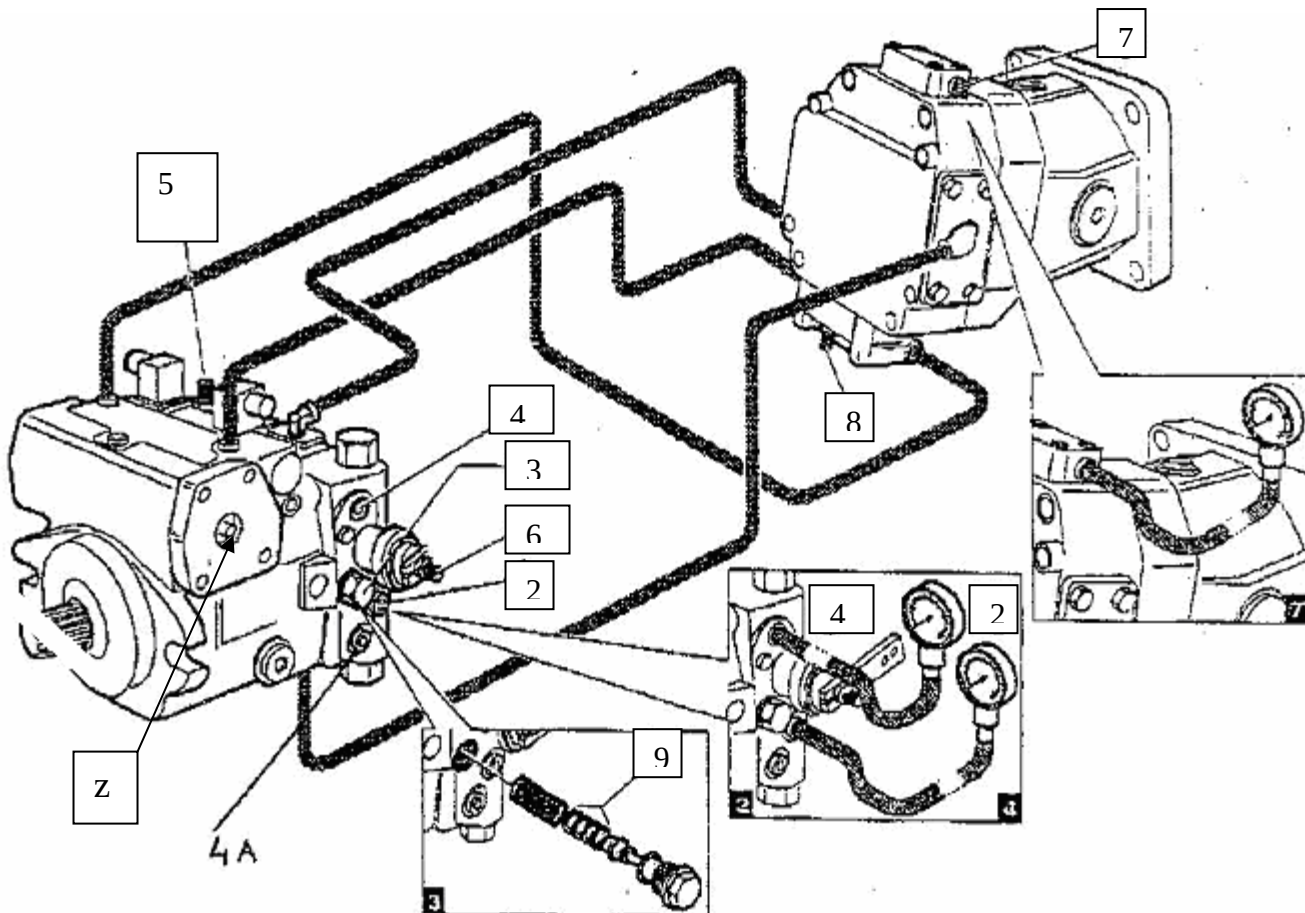
Position 6, adjust for smooth start off.

Position 7, Motor change test point 40 kph no 1-2 gear change. change point 240 bar

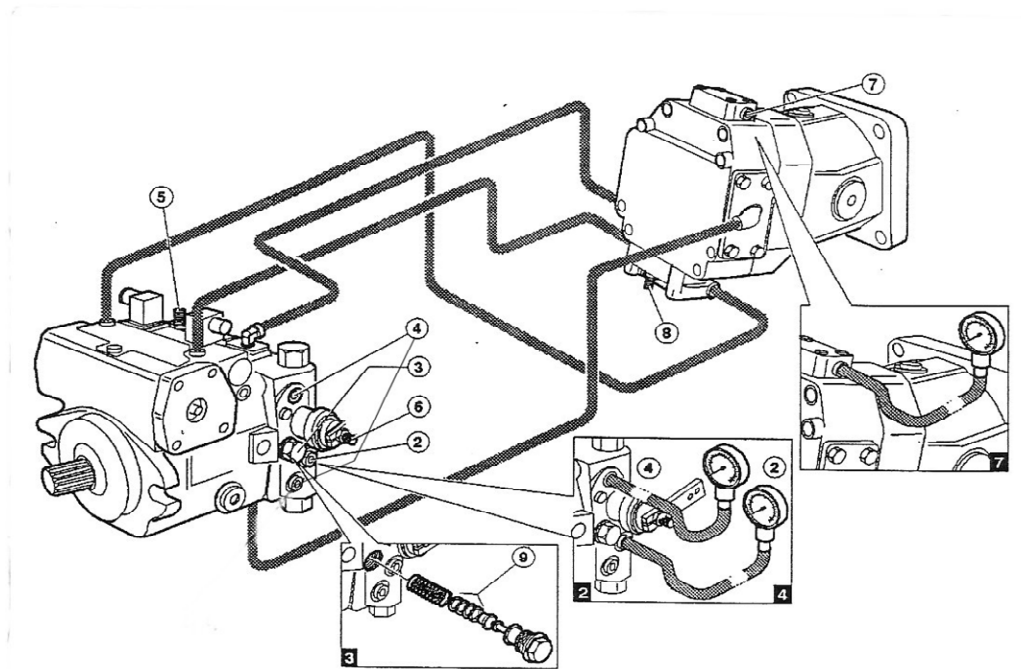
Position 8, this is for calibrating the change point between 1-2 automatic change normally set between 220 -240 bar tested at point 7.

Position Z, neutral setting, adjust if machine is dragging in neutral.

Position 9, pilot pressure relief valve. [if pressure is low fit a washer under spring to bring pressure up to 27 bar]



ADJUSTMENT OF THE HYDROSTATIC UNIT



ATTENTION: The pipes and gauges etc. are to be connected/disconnected with the engine stopped and after having released any residual pressure.

ATTENTION: The hydraulic oil temperature must be approximately 60° C to be able to adjust correctly. The tolerance on the pressure values to be read is approximately 10 bar.

Starting adjustment

- Engage forward gear at minimum rpm and the machine should not move.
- The machine should start to move when the diesel engine is approximately at 1000 rpm.

If starting is not correct:

- Loosen the register in position 6 to advance starting.
- Tighten the register in position 6 to delay starting.

Feeding pressure

- Using a 60-bar gauge, unscrew the cap in position 2 and remove it, then connect the gauge in its place.
- Rev the diesel engine to maximum rpm and the gauge in position 2 should show a pressure reading of 27 bar.
-

If the pressure reading is lower than 27 bar:

- Unscrew the cap 3 and add the dedicated spacers under the spring, then test the pressure again and continue until the pressure reaches 27 bar.
- If the pump is the 71 cc type, the adjustment is done by turning the dedicated register, which is fitted instead of the cap in position 3.

Maximum pressure of the hydrostatic pump

- Using a 600-bar gauge, unscrew the cap in position 4 and remove it, then connect the gauge in its place (use an extension so that the gauge reaches the cab).
- Start the diesel engine.
- Engage the fast mechanical gear.
- Engage the fast electrical gear (if present).
- Engage forward gear.
- Hold the machine still by pressing the service brake pedal.
- Rev the diesel engine to maximum rpm (with the machine still not moving).
- The gauge connected in position 4 should read 420 bar.

If the pressure reading is not correct:

- Unscrew or screw the register in position 5 until a pressure of 420 bar is reached.

Adjusting the pressure of the hydrostatic engine

- Using a 600-bar gauge, unscrew and remove the cap in position 7 and connect the gauge in its place (use an extension so that the gauge reaches the cab).
- Using a 600-bar gauge, unscrew and remove the cap in position 4 and connect the gauge in its place (use an extension so that the gauge reaches the cab).
- Drive the machine at maximum speed on flat and even road.
- Check if gauges 4 and 7 show the same pressure reading.

If the pressure readings are different:

- Stop the machine and unscrew (to reduce) or screw (to increase) register 8 until the two pressures are the same.
- Keep the machine at maximum speed, start to brake slowly: gauges 4 and 7 rise simultaneously to 240 bar.
- Gauge 7 should now suddenly drop to 30-40 bar, while that of the pump continues to rise to 420 bar.
- Once the machine stops and stalls (pump at maximum pressure), the engine pressure should fall to 0.

If the pressure on gauge 7 falls before or after the 240 bar:

- Stop the machine and unscrew or screw register 8 until you reach the correct setting.
- Repeat the tests until you reach the correct pressures.

Upon completion of the tests, make sure the hydrostatic engine changes displacement correctly.

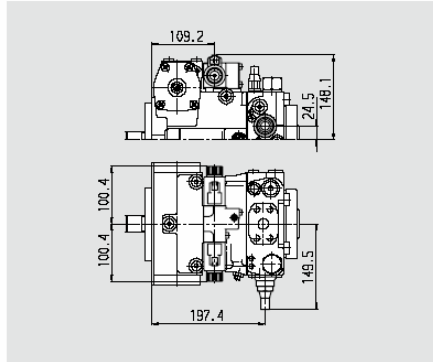
Rexroth Tests & Valves Explanations

- ✧ **High Test Port** pressure check point gauge 600 bar end. Top is forwards and lower is a bung and will need test port changing to check reverse. Place machine in second gear, with feet hard on brakes, direction selected, rev machine and observe pressure.
 - 700 RPM 30 bar
 - 1200 RPM 280 bar
 - 1600 RPM 420 bar
 - 2500 RPM 420 bar
- ✧ **High Pressure RV** Screw in to raise out to lower high pressure 420 bar do not exceed 440 bar as you will interfere with workings of combination valves.
- ✧ **Combination valves** Set at 450 bar rear forwards front reverse. These are here to remove any sudden shocks. But also act in charging the system with charge pump oil.
- ✧ **Motor Change Test Port** Motor changes displacement during running. Max displacement means more torque less speed.
Min displacement means less torque more speed.
Fit gauge 600 bar pressure end to high test port and motor change test port. Raise machine from the ground. Move direction lever to forwards and put engine to full rpm. Pressure should be around 180 bar. Gradually apply brakes, both gauges should rise together until between 220-240 bar is achieved, further application of brakes will gradually decrease reading on motor change and increase to 420 bar on high test port at which point motor change should read zero. NOTE do not prolong test as brakes could become overheated. If pressure is correct but top speed is not achieved ie 18 kmh is top speed. Pipe dust can prevent valve from operating in motor remove cap with X1 and X2 pipes attached. Remove carefully and clean.
- ✧ **Motor Change Adjustment** If motor change pressure is different to above unlock nut and screw out to decrease value and in to increase.
- ✧ **Min Displacement screw** screw out to make machine faster, in for slower. Warning do not exceed 38 KMH.
- ✧ **Charge Test Plug** Remove test plug and fit test port. Port is different size to high pressure. Pressure should read 24-27 bar. If test port is not to hand you can fit 60 bar end gauge to high pressure test port be sure not to put machine into drive, you will get the same pressure. Note if pressure is low you may experience a vibration through the hydrostatic when driving.
- ✧ **Charge RV** Charge pressure relief valve. Remove plug and insert washer to increase remove to decrease pressure 24-27 bar.
- ✧ **Pilot Pipe T Point** You will find two pipes coming from pump to motor called X1 and X2, these change the displacement of the motor and is known as pilot pressure. If you place a T into one of these lines dependent upon direction with a 60 bar end gauge you should with the applicable direction selected and brakes applied get 5 bar at idol and 24-27 bar 2500 rpm. Pilot pressure is governed by servo valve block (block with forwards and reverse solenoids fitted). If pilot pressure is low suspect blocked orifice in valve block.

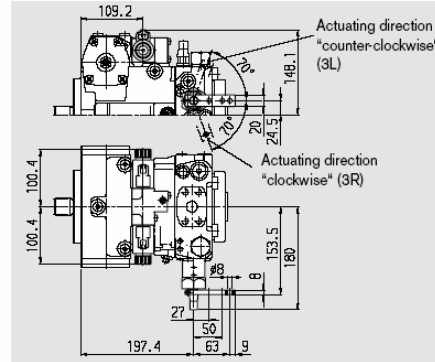
Main Transmission Pump

To adjust the variable flow (5 bar at idle to 25 bar at full revs) from the transmission pump that moves the swash plate in the motor and feeds the hydraulically assisted brakes.

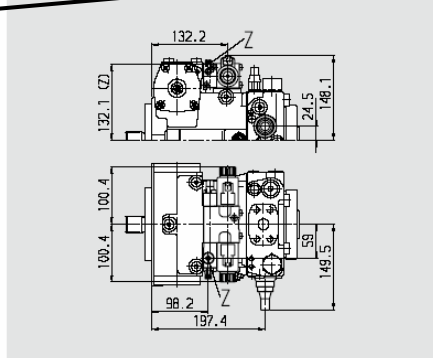
Hydraulic control, speed related, DA
Control valve, fixed setting, DA2



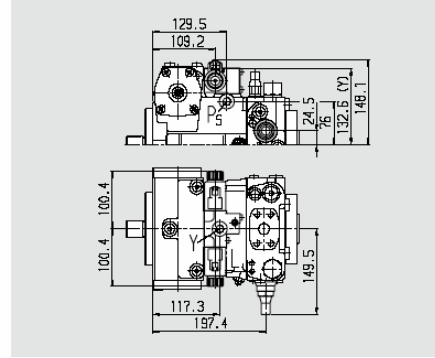
Control valve, mech. adjustable with position lever, DA3



Control valve, fixed setting and hydraulic inch valve mounted, DA4/DA8



Control valve, fixed setting and ports for pilot control device, DA7



The arrows point to the DA control valve. Page 16 of data sheet RE 92 003 refers to the function.

Basically, an oil path to control functions, internal and external via port Pst, is opened by this valve as engine speed is increased. Adjustment affects the relationship between engine speed and control oil pressure.

The tamperproof cap will need to be removed, however doing so may adversely affect warranty. The seal lock nut, 13mm AF, will need slacking a little, and the M8 threaded pin can then be adjusted with a 4mm hexagon key. This is a sensitive adjustment, 1/8th of a turn can make a considerable difference.

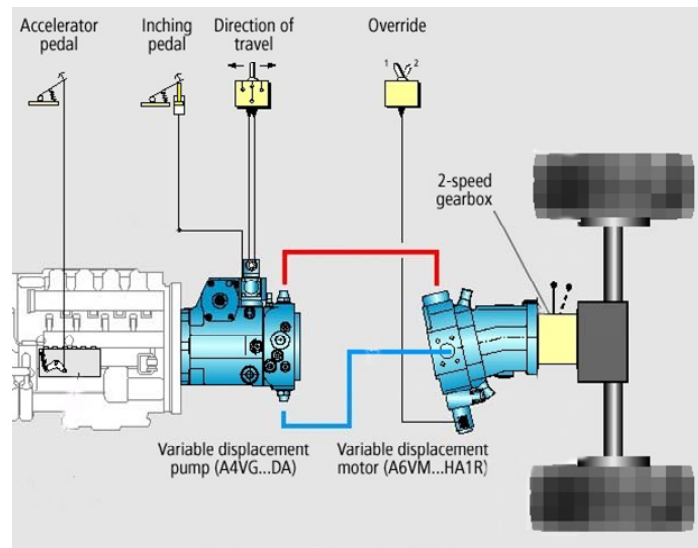
In order to increase control pressure at a given input speed, turn the threaded pin counter clockwise, noting the original position. It may be seen that the transmission will attempt to drive at lower engine revs than desired, stalling the engine, and requiring the DA to be reset to it's original position.

THE HYDROSTATIC SYSTEM



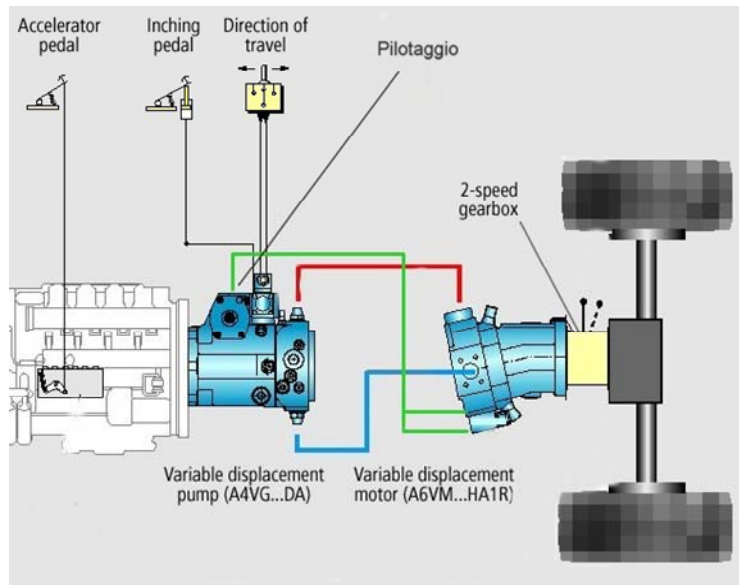
HYDROSTATIC SYSTEM WITH “EZ”

THIS HYDROSTATIC SYSTEM IS COUPLED WITH THE 60 KW ASPIRATE ENGINE
THIS SYSTEM HAS 4 GEARS, YOU CAN CHANGE THEM MANUALLY
IT HAS 2 MECHANICAL GEAR DUE TO THE GEARBOX (See next page : 2-speed gearbox)
IT HAS 2 ELECTROHYDRAULIC GEARS DUE TO THE MAX/MIN DISPLACEMENT OF THE
MOTOR (See next page: override)



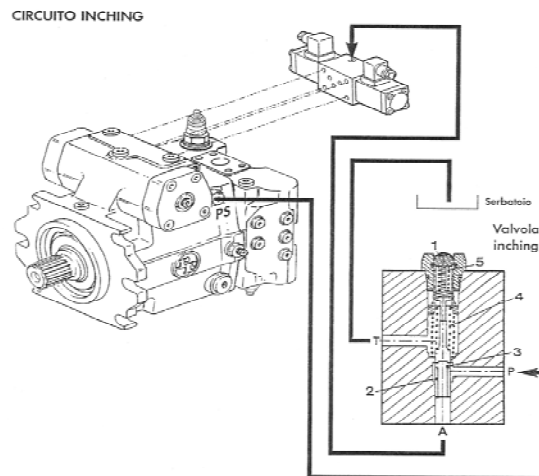
HYDROSTATIC SYSTEM WITH “DA”

THIS SYSTEM IS COUPLED WITH THE 74 KW TURBO ENGINE AND WITH THE 94 AND 103 KW TURBO-INTERCOOLER ENGINE
IT HAS 2 MECHANICAL GEARS DUE TO THE GEARBOX (see next page : 2-speed gearbox), AND, MAIN FEATURE, THE INFINITE GEARS OF THE
SYSTEM PUMP-MOTOR
WITH TWO SMALL HOSES FROM THE PUMP, THE SYSTEM SEND TO THE MOTOR A PRESSURE INFORMATION. WITH THIS THE MOTOR SET
ITSELF IN THE MOST SUITABLE DISPLACEMENT FOR THE WORKING CONDITIONS OF THE MACHINE



WHAT'S' “INCHING”

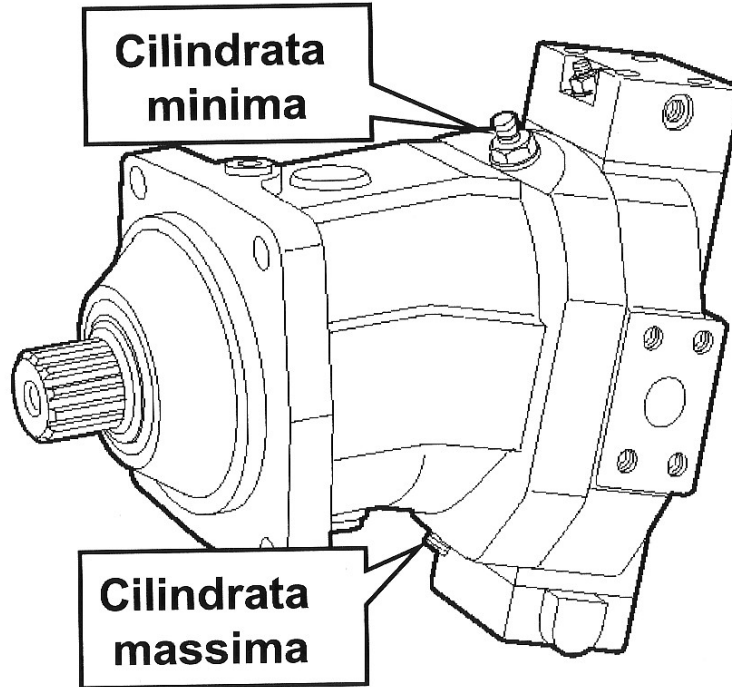
THE INCHING IS A DEVICE THAT THROUGH A VALVE, POSITIONED UNDER THE THIRD PEDAL ON THE LEFT, LET YOU STOP THE MACHINE,
THIS VALVE CUTS OFF THE HIGH PRESSURE OILFLOW BETWEEN PUMP AND MOTOR.
YOU NEED THE INCHING TO CHANGE THE MECHANICAL GEAR AND IF YOU NEED TO MOVE THE MACHINE SLOWLY ALSO ON FULL
THROTTLE.
THIS DEVICE IS A BY-PASS ON THE CONNECTION BETWEEN PUMP AND MOTOR



HOW TO REGULATE THE HYDROSTATIC SYSTEM

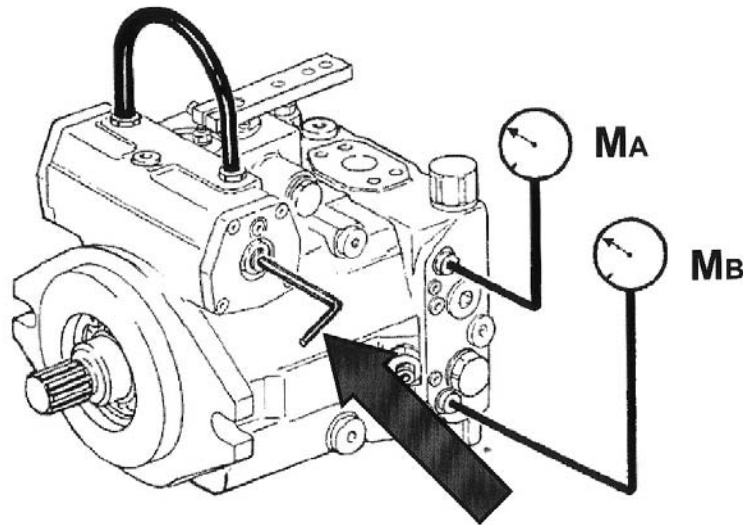
MINIMUM-MAXIMUM DISPLACEMENT:

You can do the regulation of the displacement just working on the screws on the top and on the bottom of the motor (see picture). Don't do this regulation if you are not experienced, you can damage the hydrostatic system and loose the warranty.



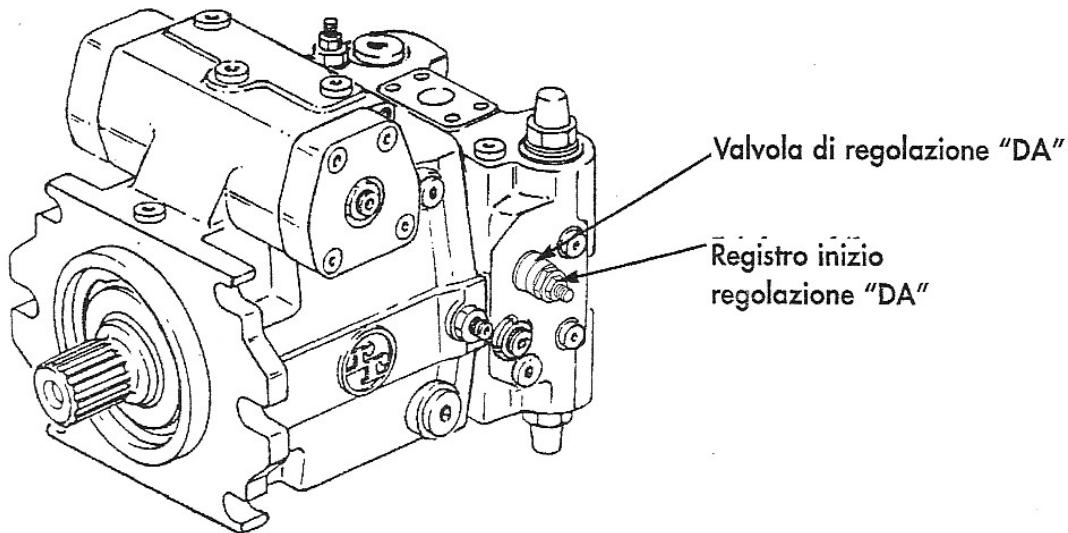
MECHANICAL ZERO:

You can regulate the mechanical zero working on the screw shown in the picture. Look for the maximum displacement of the pump for each travel directions, the middle position is the mechanical zero.



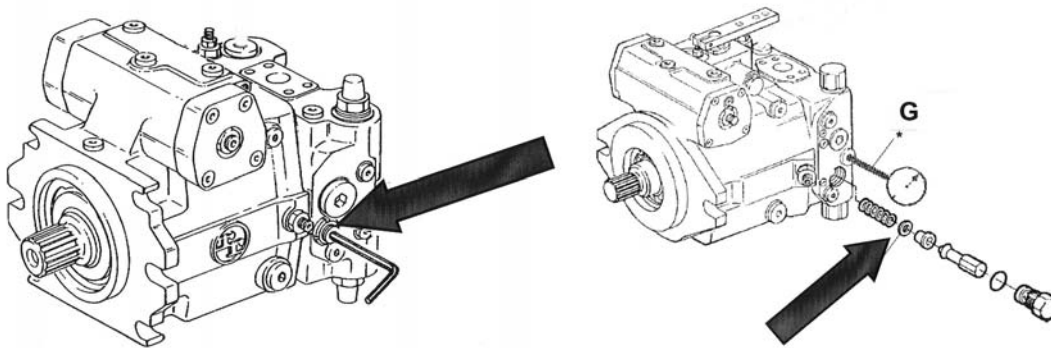
HYDRAULIC ZERO:

As the mechanical zero, if misregulated, let the machine start to move on idle. You can do the regulation screwing or unscrewing the DA valve (as shown in the picture) until the machine start to move around 1000 rpm.



LOW PRESSURE:

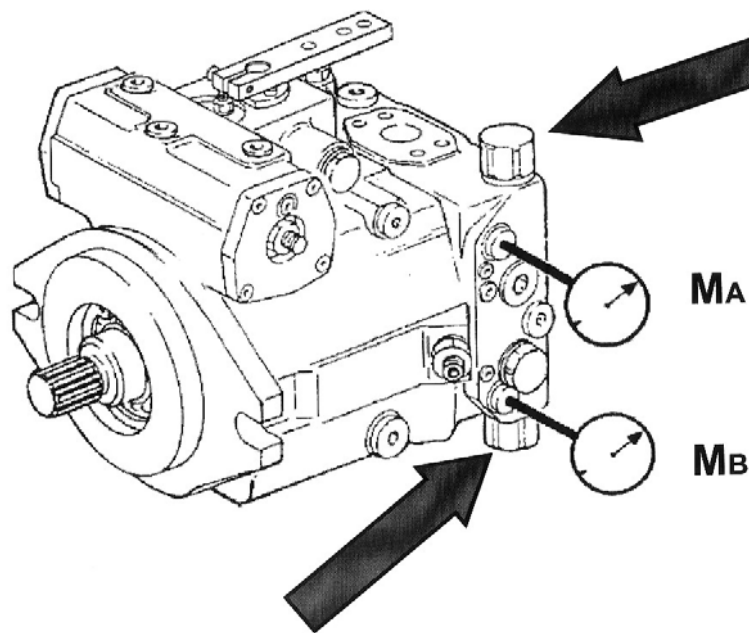
Generally this pressure should be 24 bar on idle and 27 on full throttle. You can do the regulation changing the thickness as in the picture, or working on the screw of the picture for pump with bigger displacement. This is the pressure of the INCHING device.



MAXIMUM PRESSURE:

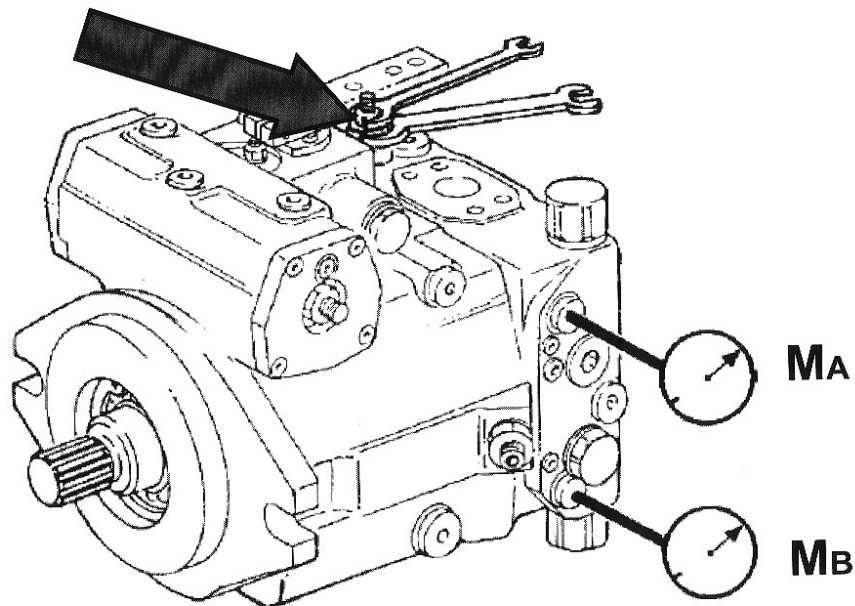
On the pump there are two antishock valve generally set on 440 bar, higher pressure could be dangerous for the pump.

If you want to change this pressure you must replace the valves shown in the picture below.



REGULATION OF THE MAXIMUM PRESSURE:

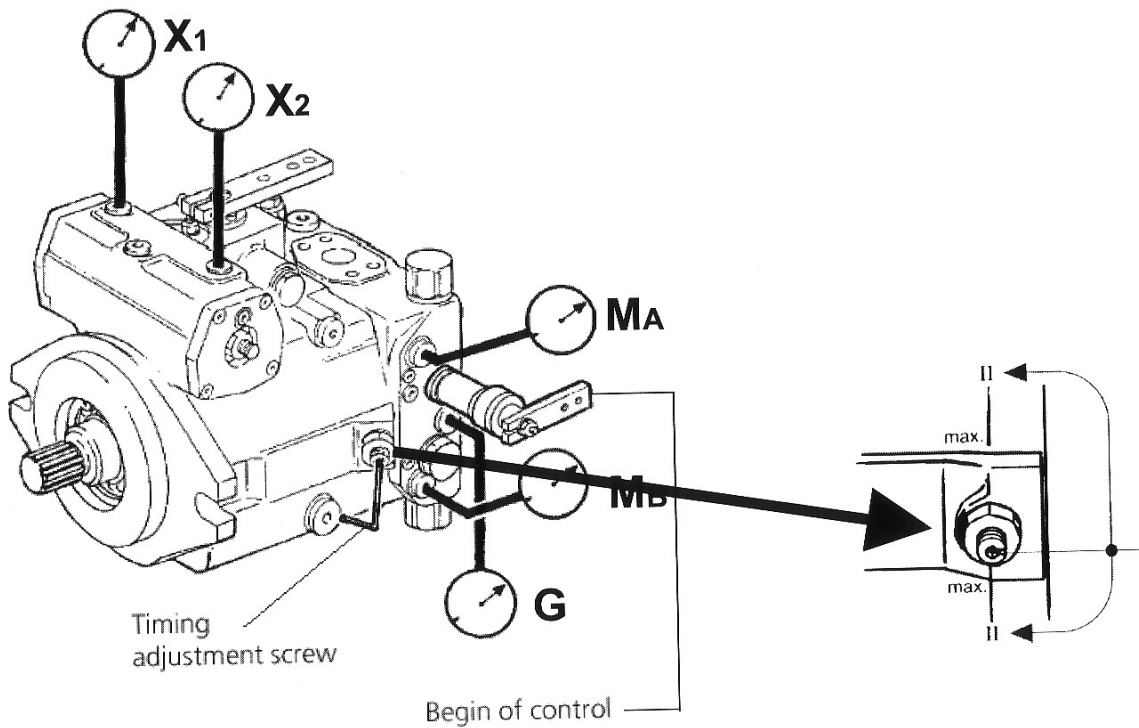
To regulate the maximum pressure you can work on the valve shown in the picture, with this regulation you can set the maximum pressure lower or higher than the antishock valves .



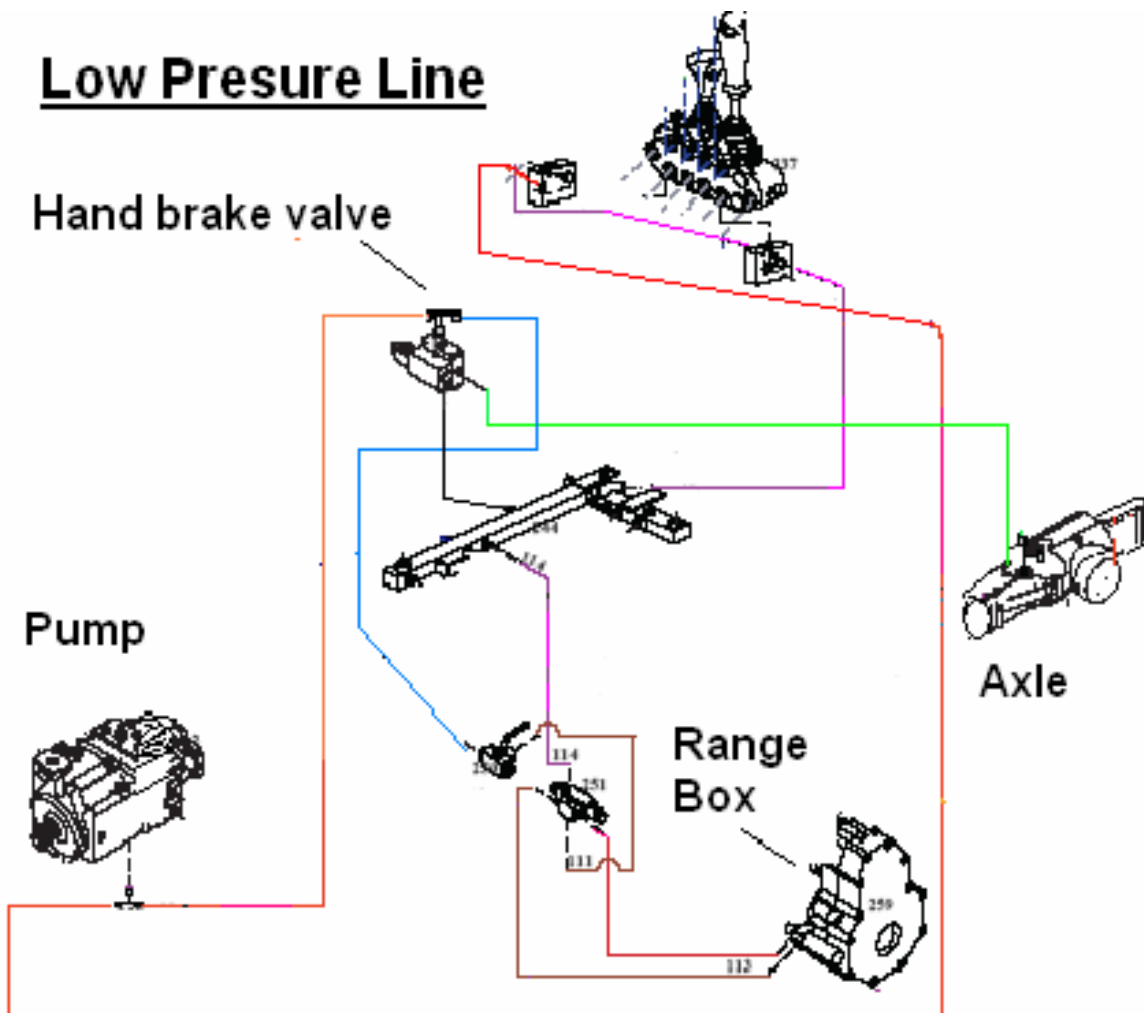
TORQUE REGULATION:

This regulation, as the displacement regulation, is done by the supplier and the customer can't modify it for any reasons, for this you can loose the warranty .

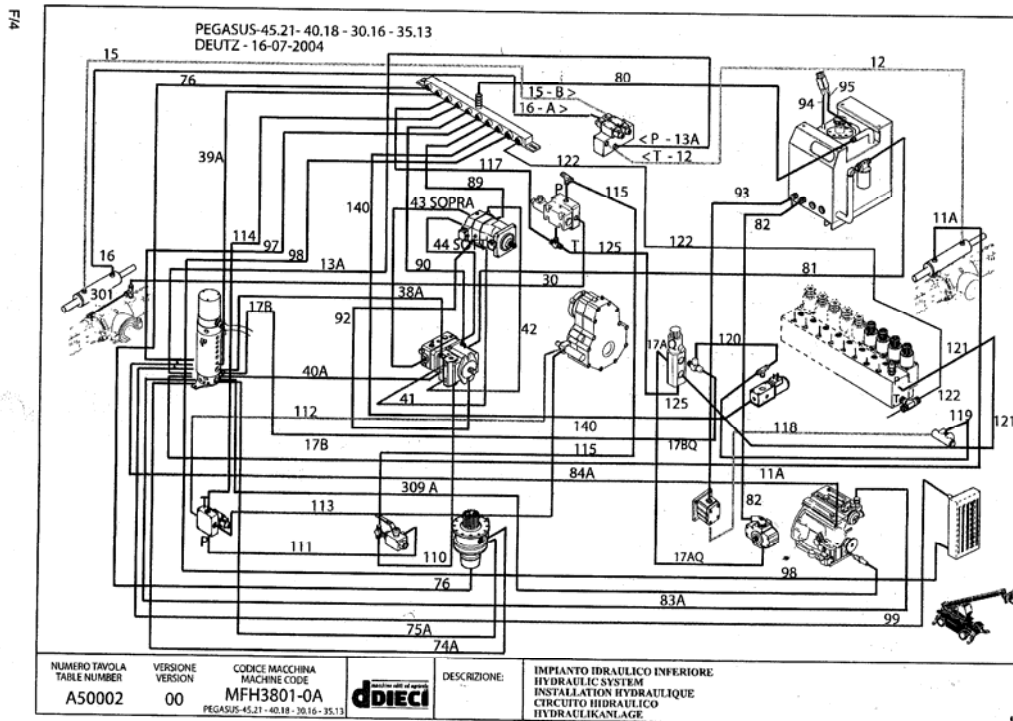
With the screw of the picture you can set on how many rpm of the engine you have the maximum torque of the hydrostatic transmission.



Low pressure Pipeline Is feed from the under side of the transmisson pump not shown the above diagram. On some machines it is a single pipe with a restrictor in the union and in certain machines it will be a tee piece with restrictors in the tee piece. The low pressure pipe line feeds the hi-low range selector, 1-2 gear and electrical controlled solenoids valves used on the main distributor (boom extension etc.). These machines normally have a single pipe coming from the pump feeding in line to the distributor. On the machines with negative braking there will be a tee piece on the pump giving two feed lines as above with also a line going to negative brake valve and then on to the axle where it will go direct to the brake piston in the axle or in the case of the Zeus there is an external ram to operate the handbrake. If the restrictors get blocked this will cause slowing down or stopping of the different functions that are controlled by the low pressure line.



Low pressure line Pegasus



ddiECI Mod. E.T. PEGASUS
PEGASUS 35.13, 30.16, 40.18 and 45.21 - CIRCUIT LOWER PART
Hydraulic Circuit Diagrams

Low pressure line works under 27 bar

Pressure can be tested from the test point on the pump to show what pressure is in the system

Pressure can also be tested at the point where the pipe no 110 leaves the pump by removing pipe and fitting test clock to show what pressure is in the pump

Low pressure line is fed through pipe no. 110 from transmission pump to shut off valve.

Shut off valve feeds hi - low range selector valve through pipe no. 111

By turning off this valve you can isolate the hi - low range valve.

The low pressure line will then only feed the hand brake circuit through pipe no 115

The hand brake needs pressure to keep the brakes off.

The tee going into the hand brake valve has another out let which goes to the blocking rams on the back axle.
(any problems in this area will show up as an external leak)

By connecting pipe no 115 directly to pipe no 30 you can bypass the hand brake valve.
(you will have no hand brake in this instance)

Steering

Steering is feed from the hydraulic circuit regulated by a priority valve which gets preference from the hydraulic pump.

If dirt gets into this valve it can leave you with no power steering or leave it lumpy.

There is an orbital unit situated in cab under steering wheel.

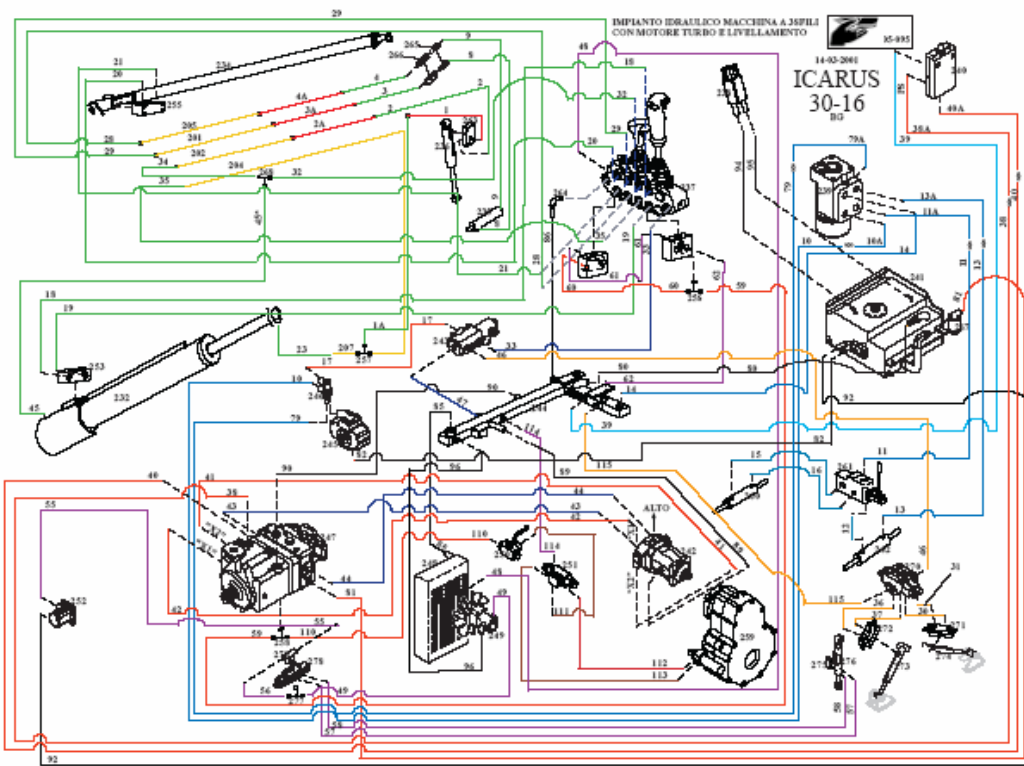
A selector valve which is manually controlled in the fixed post machines, and electrically controlled in the rotation machine. Giving you the 2 wheel steer, crab steer and 4 wheel steer positions.

The steering rams are fixed on the front and rear axles, and can be replaced as a complete unit or removed and seal fitted as needed.

The 3 way selector valve is fitted between the orbital unit and the rams and diverts the oil as needed to get the steering modes as selected. There are o rings in this selector valve and if they blow the steering can run out of line as you drive along in the four wheel steer position.

On the little Dedalus's there is an accumulator fitted under the engine this is to do away with noise in the cab. With out this accumulator a high pitch noise is generated through the pipe work and ends up in the cab.

On the Pegasus models the steering is feed through the central turret. The pipes can be followed via the numbering on the turret itself.

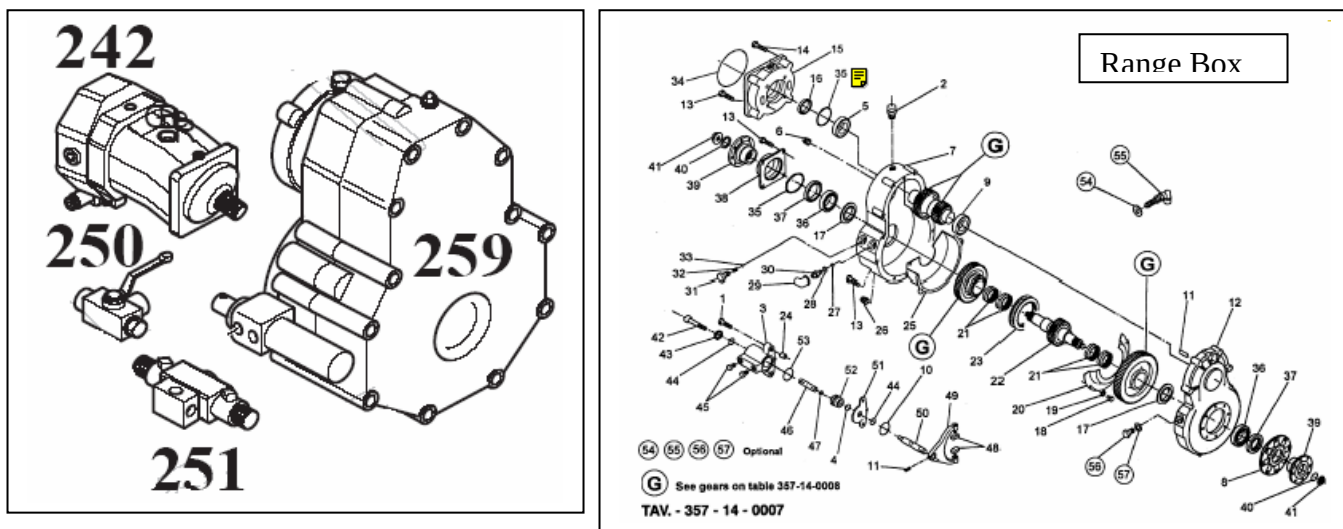


Range Box

The range box or drop box behind front axle that holds the transmission drive motor. This range box is controlled by hydraulic solenoid pressure holding the box in either low or high range via a double solenoid valve mounted on the right side of range box on chassis. This solenoid is electrically controlled from the hare switch on dash. Rock it one way with the inching pedal depressed and you have low range with the 'A' light just above the switch illuminated and no hare illuminated, rock it the other way and you have high range with the 'A' light illuminated and the hare illuminated. It is necessary to depress the inching pedal as this operation closes a switch mounted on the top of the inching pedal to provide the electric power to the hare switch. This operation also helps to stop the machine from travelling, as it is imperative that the machine is stationary while changing range gear to avoid that crunching sound while gears try to mate into one another. **New drivers need to be warned of this operation**

The electric circuit for this system is found on page 3 of the wiring diagram. Power from fuse FU9B goes to S38 micro switch (above inching pedal) then it goes to S8 hare switch (on dash) which in turn sends power down to either Y10 or Y11 solenoid (on chassis by range box) depending on which switch way it is pressed.

The circuit for the 'A' light and the 'hare' light is fed from fuse FU1B going to H20 'A' light (Pilot light gears engaged) same feed for F21 (Pilot light for Hare engaged). From these 2 pilot lights it then goes to their respective switches S34 micro switch for gears engaged (on the range box right hand side running along selector rail) and micro switch S35 for Hare engaged (in switch itself).

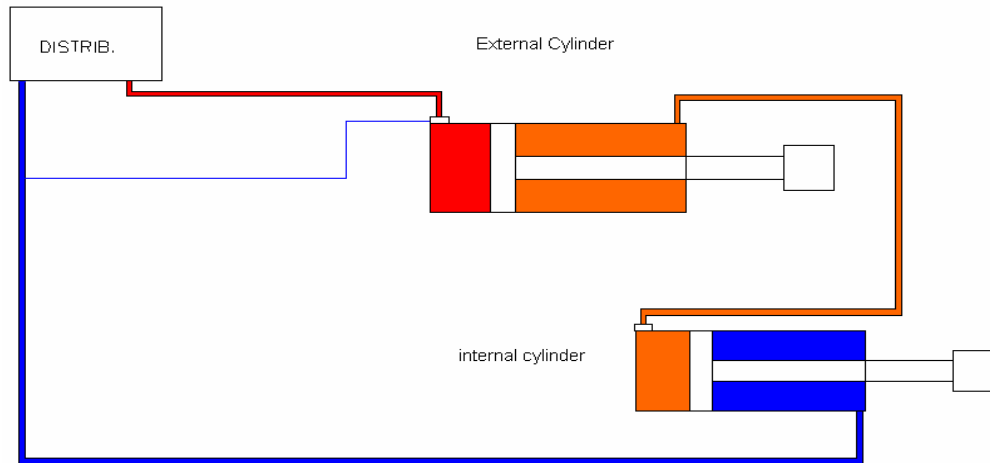


251 – Solenoid valve that operates hi/low range in rangebox. This unit receives pressure from the shut of valve 250 which in turn is feed from the transmission pump. This solenoid directs pressure to the housing ports number 45 in drawing which causes the selector 49 to move from hi to low.

250 – Shut of valve is used when you have to tow the machine. Shut of vale and manually select neutral gear in range box via rod 46 which protrudes from housing 45. This stops the motor 242 from back pressurising the transmission pump while being towed.

If the range box fills up with oil to the point that it over flows through the breather mounted on the top. It will be either the seals in the selector housing or the seal in the transmission motor. To check which remove the motor back from the range box 50mm and run the machine you will clearly see which is leaking.

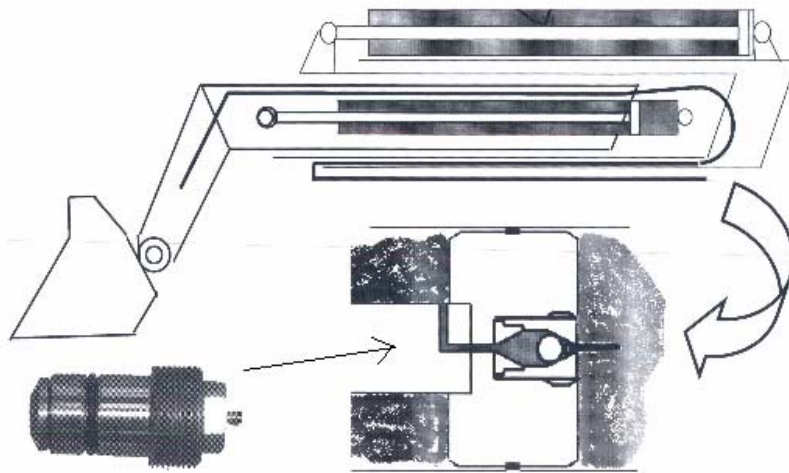
OPERATION OF THE BOOM WITH SIMULTANEOUS EXTENSION (10-11-12-13-14 metres)



WHILE THE BOOM IS EXTENDING, THE CYLINDERS MUST BE “TIMED”, IN OTHER WORDS THEY MUST REACH THE END-OF-STROKE TOGETHER AT THE SAME TIME.

THIS CONDITION IS CRUCIAL BECAUSE IF THEY ARE NOT “TIMED” THE HYDRAULIC PIPES INSIDE THE BOOM COULD BREAK.

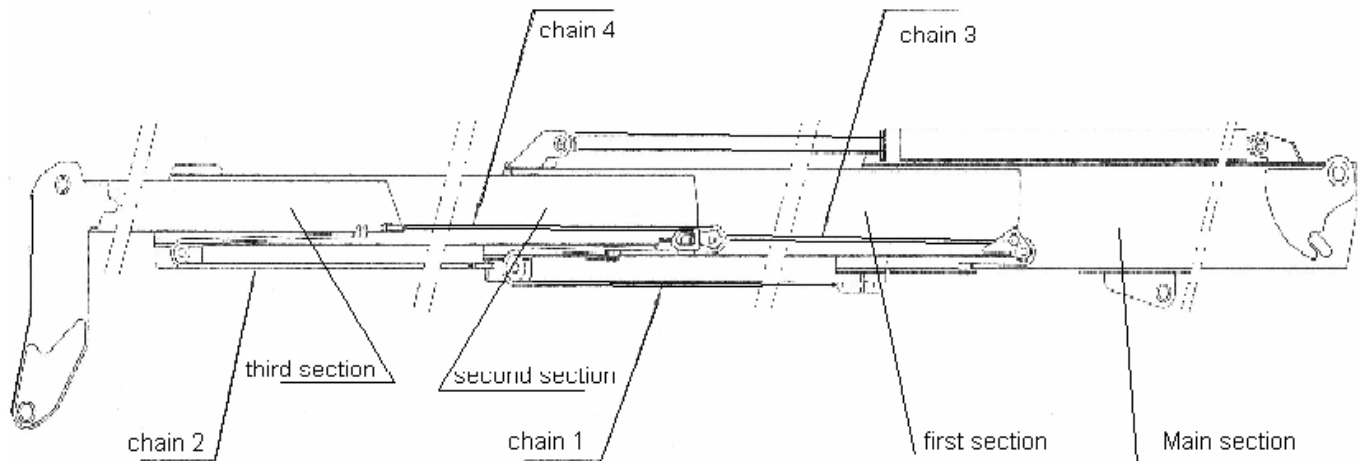
THE VALVE ILLUSTRATED IS SECURED TO THE BOTTOM OF BOTH CYLINDERS AND, IF THE SAME DO NOT REACH THE END-OF-STROKE TOGETHER AT THE SAME TIME, IT ENABLES THE OIL TO CIRCULATE AND THEREFORE IT ENABLES THE CYLINDER THAT IS SLIGHTLY LATE TO REACH ITS END-OF-STROKE THEN GET BACK IN “TIME”



IF THE BOOM IS NOT “TIMED” IT CAN ONLY CAUSE PROBLEMS IN THE RETRACTING PHASE AND IN PARTICULAR WHEN THE SECOND BOOM EXTENSION IS “LATE”. THIS SITUATION GENERALLY CAUSES THE BREAKAGE OF THE HYDRAULIC PIPES AGAINST THE EDGE OF THE FIRST BOOM EXTENSION THAT IS ALREADY COMPLETELY RETRACTED.

IF THE BOOM FAILS TO GET SYNCHRONISED AUTOMATICALLY, YOU ARE STRONGLY RECOMMENDED TO REPLACE BOTH VALVES AS SOON AS POSSIBLE TO AVOID RATHER AWKWARD AND COSTLY BREAKAGES.

Four section Boon with chains and how they work



- The chains n° 1 and n° 3 are connected to the first part of the main section and to the last part of the second section
- The chains n° 2 and n° 4 are connected to the first part of the first section and to the last part of the third section.

EXTENSION PHASE:

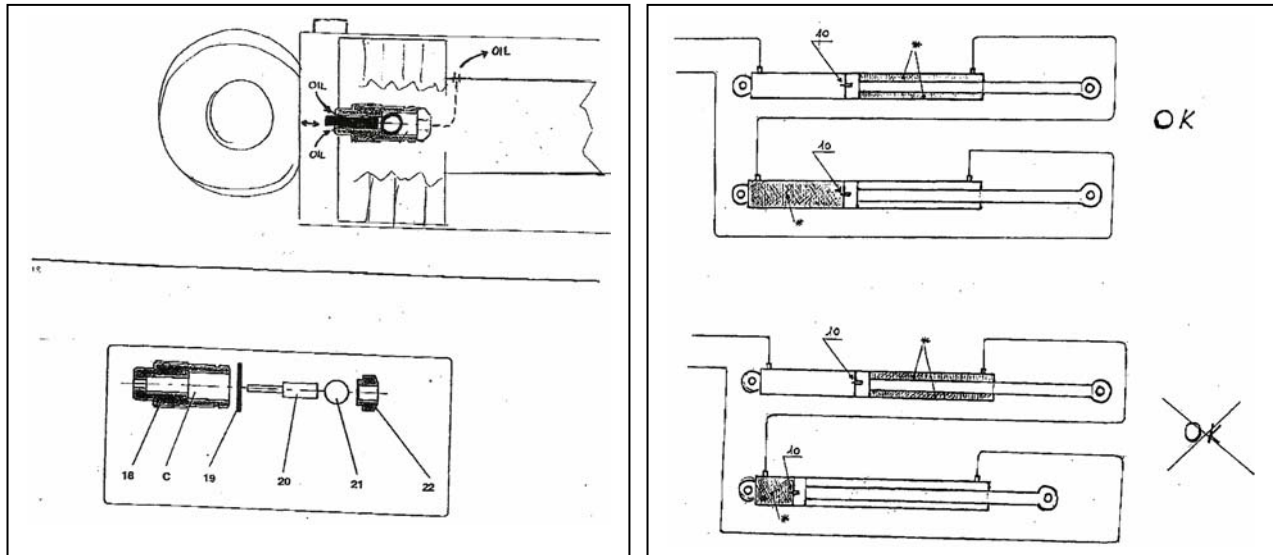
1. The extension cylinder pushes the first section.
2. The chain n° 1 must go out so it pulls outside the second section.
3. During the extension of the second section the chain n° 2 must go out so it pulls outside the third section.

RETURN PHASE:

1. The extension cylinder pulls the first section.
2. The chain n° 3 must return inside so it pulls the second section inside.
3. During the return of the second section also the chain n° 4 must return, so it'll pull the third section inside

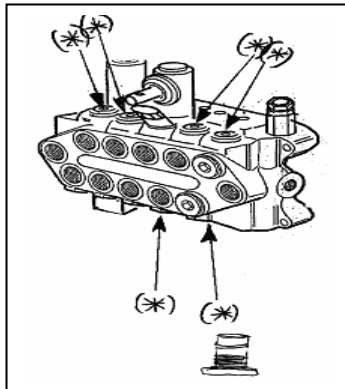
Extension Rams

On the Machines with 3 sections there is an internal extension ram and an external extension ram. If these ever get out of scyronization with one another ensure the check valves are operating OK. If this is not a suscess then it may be a little valve that is situated in the centre of the ram, which equalises the pressures in the 2 rams. If this valve gets blocked



Boom slow to rise even with high revs

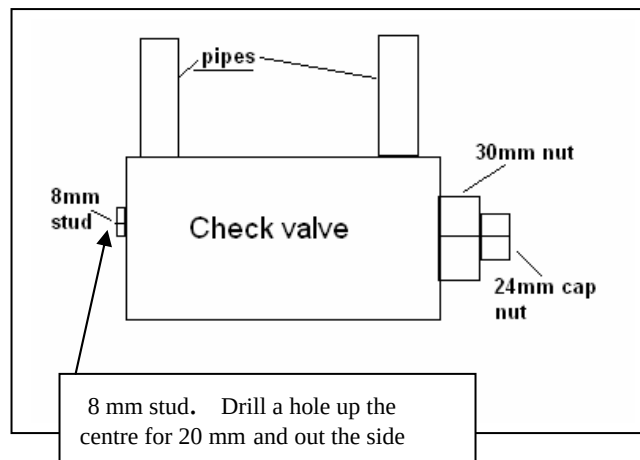
If the boom will only rise or lower under high revs it may be that a seal may be gone in one of the ports these can be checked by taking out the ports along the top and the bottom of the main distributor. The symptoms will give the impression that the main pump has worn out and is not fit to lift the boom.



Verify that these plugs are intact with o'rings in place. Not all distributors will have these plugs. They are there to allow you to change the position of the tilt ram pipes. The tilt ram must have a relief valve in the circuit to allow the self levelling to work with out bursting the tilt ram

Boom Drops 150mm on the down command from basket control

Drops suddenly, when you go to lower the boom from the basket control. Will work ok on the first command to lower but will drop at the second command. (First press of the button OK second press of the button boom drops) You will need to change the 8mm stud that is in the end of the check valve with a modified one. (Modified one has an (1mm) hole drilled up the centre of it for 20 mm, then a connecting hole drilled in from the side) **Important when you remove the stud the boom will drop**



INTERNAL EXTENSION JACK:

REMOVAL & ASSEMBLY

REMOVING THE JACK

FIT THE BOOM HORIZONTALLY AND COMPLETELY RETRACTED, THEN DISCONNECT THE 4 PIPES ON THE HEAD OF THE BOOM AND PULL THEM OUT



OPEN THE REAR PANEL



LOOSEN THE TERMINAL THAT HOLDS THE HYDRAULIC PIPES



PULL OUT THE PIPES DISCONNECTED FROM THE HEAD BY APPROXIMATELY 1 METER



IMPORTANT!!!

- ALWAYS CHECK FOR THE PRESENCE OF ANY ELECTRICAL CABLES WITH 7 or 24 POLES
- (GREY CABLES WITH RUBBER SHEATH)
- IF PRESENT, DISCONNECT THE INTERNAL ELECTRICAL WIRES FROM THE SOCKETS ON THE BOOM HEAD AND THEN FOLLOW THE SAME INSTRUCTIONS FOR THE HYDRAULIC PIPES

START THE MACHINE AND EXTEND THE BOOM UNTIL YOU CAN SEE THE INTERNAL CYLINDER PIN



REMOVE THE SNAP RING AND SHIM FROM THE SEAT



REMOVE THE PIN



START THE MACHINE AND RETRACT THE BOOM (THE LAST BOOM SECTION WILL OBVIOUSLY STAY OPEN)



REMOVE THE SNAP RING AND SHIM FROM THE SEAT AT THE BACK OF THE EXTENSION CYLINDER



REMOVE THE PIN



SLIGHTLY EXTRACT THE CYLINDER



DISCONNECT THE PIPES AND COLLECT THE OIL THAT DRAINS



EXTRACT THE CYLINDER



ASSEMBLE THE JACK

EXTEND THE CYLINDER BY APPROXIMATELY 2 METERS



INSERT THE CYLINDER



BRING THE PISTON EYE UP TO THE HOLE ON THE LAST EXTENDING BOOM SECTION



INSERT THE PIN, SHIM AND SNAP RING



CLOSE THE CYLINDER ALMOST COMPLETELY BY PUSHING IT, FIT THE LOCKING VALVE BACK IN PLACE AND CONNECT THE TWO HYDRAULIC PIPES TO IT



START THE MACHINE AND RETRACT THE CYLINDER UNTIL THE SECURING HOLES MATCH-UP, THEN INSERT THE PIN, FIT THE RIGHT SHIM, FIT THE LEFT SHIM, INSERT THE PIN COMPLETELY WITH SHIM AND SNAP RING



RETRACT THE BOOM AND LEAVE THE EXTENSION CONTROL ENABLED FOR A FEW MINUTES TO FILL THE PISTONS WITH OIL, THEN PULL THE PIPES OUT FROM THE HEAD AND CONNECT THEM.



BLOCK THE PIPES BY TIGHTENING THE TERMINAL AND COMPLETE BY SECURING THE ENCLOSING PANELS



Over Load Setting on new cab Dieci Teleporters

With monitor 4C.006568

Type with electric cable attached behind monitor

1. Put boom down horizontal with no load on the forks
2. Switch machine off.
3. Remove the fuse cover panel on the left hand side of dash there is a loose plug numbered X23, take this plug and join the two wires in it with a connector. (Or a length of wire placed in the terminals)
4. Switch machine on and start engine
5. On the over load display panel press the TEST button once wait for orange and red lights to settle approximately 5 seconds.
6. Press the TEST button again and wait for light to settle.
7. Place a known weight on the forks (not necessarily the maximum lift weight) wheels straight on level ground.
8. Extend the boom out to the prescribed distance as marked on the lift chart.
9. Press the TEST button again wait for lights to settle. The buzzer will continue to sound until you remove the connector on plug X23.
10. Test the machine that setting are accurate

If there is no boom actions from joy stick controls and the overload panel is dead.

It is possible to by pass over load system by pushing the red button under over load monitor.

If this does not work remove panel and connect wire number 3 with wire number 4 on the wiring connector on the rear of panel. This will eliminate the over load system

Over Load Setting on new cab Dieci Teleporters

With monitor 4C.00015135

Type with plug behind monitor

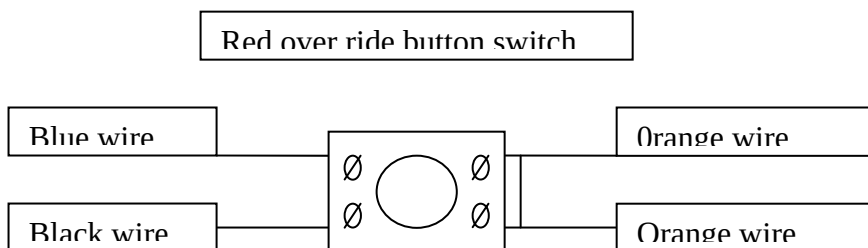
1. Put boom down horizontal with no load on the forks
2. Switch machine off.
3. Remove the fuse cover panel on the left hand side of dash there is a loose plug numbered X23, take this plug and join the two wires in it with a connector. (Or a length of wire placed in the terminals)
4. Switch machine on and start engine. 3rd light orange and flashing
5. Press test an hold until 3rd light off and 1st on green
6. Press test once. When lights settle (5-10 seconds) power green light on and last red light on
7. Press test once. When lights settle (5-10 seconds) last red light on
8. Place a known weight on the forks (not necessarily the maximum lift weight) wheels straight on level ground.
8. Extend the boom out to the prescribed distance as marked on the lift chart.
9. Press the TEST button again wait for lights to settle. The buzzer will continue to sound until you remove the connector on plug X23.
10. Test the machine that setting are accurate

If there is a lot of noise and over load on all the time – the sensor is most likely to be at fault

If there is no power showing on the monitor -- It is most likely to be the monitor at fault

The over load can be by passed by the following procedure

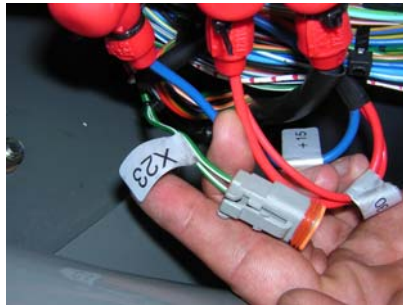
1. remove overload panel from dash
2. on the back of the red over ride button disconnect the blue wire
3. connect the blue wire into the orange wire at the other end of over ride button
4. disconnect the plug from the rear of the monitor



OVERLOAD DEVICE SETTING

On single cell overload

- WITH THE MACHINE OFF, BRIDGE THE CONNECTOR « X23 » PLACED UNDER THE ELECTRICAL PANEL BOARD (ON THE LEFT HAND OF THE STEERING WHEEL)



- TURN ON THE MACHINE, BOOM RETRACTED AND IN ORIZONTAL POSITION, THE YELLOW LED IS ON, PRESS THE BUTTON "TEST" FOR AT LEAST 2 SECONDS AND THE GREEN LEDS SHOULD BE ON.



- PUSH AGAIN "TEST" AND AFTER AROUND 4/5 SECONDS THE YELLOW LED WILL BE ON, PRESS "TEST" AGAIN AND AFTER 4/5 SECONDS THE RED LED SHOULD BE ON.



- LOAD A KNOWN WEIGHT ON THE FORKS (FOR EXAMPLE : 1000 KGS.) AND EXTEND THE BOOM (ORIZONTAL POSITION) TILL THE POSITION WHERE THE ALARM SHOULD PUT IN ACTION (REFERRING TO THE LOAD CHART).



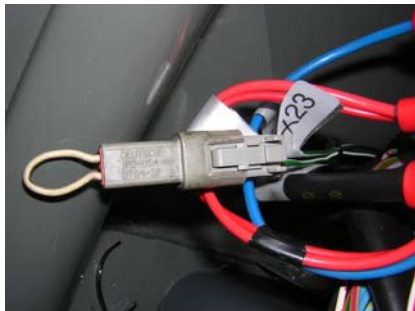
- WAIT UNTIL THE BOOM STOP TO OSCILLATE AND PRESS « TEST » AGAIN, AFTER THIS ALL THE LED WILL BE ON AND YOU'LL HEAR THE SUOND OF THE BUZZER
- STOP THE MACHINE (OFF).
- REMOVE THE BRIDGE ON CONNECTO « X23 » AND TRY THE CORRECT WORKING OF THE MACHINE.

FOR A DOUBLE OVERLOAD CELLS MACHINE

THE REGULATION MUST BE CARRIED OUT AS FOLLOWS



WHILE THE MACHINE IS OFF, WITH THE BOOM CLOSED AND HORIZONTAL TO THE GROUND, TURN THE KEY TO THE "ON" POSITION.



MAKE A BRIDGE ON THE "X23" CONNECTOR AND TURN ON THE MACHINE.



PUSH THE "TEST" BUTTON OF THE DISPLAY ONCE: BOTH YELLOW LEDS WILL TURN ON.



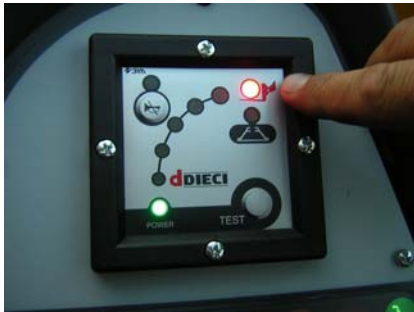
PUSH AGAIN THE "TEST" BUTTON AND KEEP IT DOWN FOR 10 SECONDS: THE SMALL GREEN LED WILL TURN ON.



PUSH THE "TEST" BOTTOM ONCE MORE: THE GREEN LED WILL START BLINKING. AFTER A FEW SECONDS, THE YELLOW LED, CORRESPONDING TO THE STABILIZER TURNS ON AND THE GREEN ONE WILL BE PERMANENTLY ON.



MOVE THE STABILISERS DOWN. THE LIGHT ON THE INFERIOR INSTRUMENT PANEL (DOWN LEFT) TURNS ON. PUSH "TEST" AGAIN AND BOTH STABILISERS' LEDS (THE GREEN AND THE YELLOW ONES) WILL START FLASHING).



AFTER A FEW SECONDS, THE FORKS' RED LED WILL TURN ON. LIFT THE STABILISERS UP. ALLS LED WILL TURN OFF. PUT A KNOWN LOAD ON THE FORKS AND SLIP OFF THE BOOM TILL THE POSITION BY WHICH THE ALARM IS WANTED TO GO OFF IS REACHED (SEE THE LOAD SCHEME OF THE MACHINE).



PUSH THE "TEST" BOTTON AGAIN AND THE RED LED WILL START BLINKING. AFTER A WHILE IT WILL BECOME STEADY AND THE STABILISERS' YELLOW LED WILL ALSO TURN ON. MOVE THE STABILISERS DOWN: THE FEET' LIGHT WILL TURN ON. PUT A KNOWN LOAD AND SLIP OFF THE BOOM UNTIL THE POSITION BY WHICH THE ALARM IS WANTED TO GO OFF IS REACHED (SEE THE LOAD SCHEME OF THE MACHINE).



PUSH THE "TEST" BUTTON AGAIN AND THE RED LED WILL START FLASHING. AFTER A FEW MOMENTS IT WILL BE STILL ON, BUT STOP BLINKING; THE BEEPER WILL START RING. ALL LED WILL SWITCH OFF, EXCEPT THE GREEN ONE.

TURN THE MACHINE OFF, REMOVE THE BRIDGE FROM THE "X23" CONNECTOR AND CHECK THE RIGHT SYSTEM CALIBRATION.

Over load wiring diagram and setting instructions Old Cab Machines

Control box and electrical lead Part no BEP0203/LE

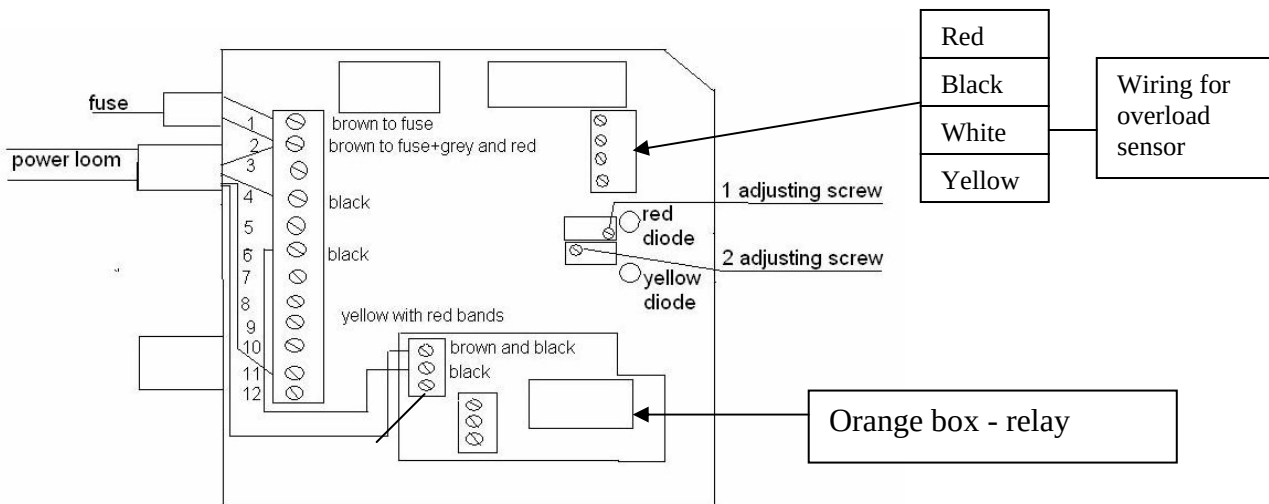
Axle sensor (extensimeter transducer) part no BEP0204

The axle sensor is tightened down to a torque setting of 7 kgs. (Make sure the under side of sensor and axle are clean.) The wires are feed up the chassis to the control box and connected into the box as described in the drawing. With the boom down and no load on it, switch on the ignition and turn on the overload the buzzer should sound overload (not always). Screw the adjusting screw (1) beside the red diode in (clockwise) until the buzzer or overload goes off. (if the overload was not on when connections were made screw adjusting screw (1) out anticlockwise until the buzzer comes on and then screw in to buzzer goes out)

Set the over load by putting a measured weight on the forks and extend out to specified distance on the loading chart. Turn adjusting screw 1 clockwise or anticlockwise as appropriate to put the red diode on (also sounds the overload buzzer and the red warning light on dash). Then retract the boom 1 meter and adjust adjusting screw no. 2 until the yellow diode comes on (also lights the yellow warning light on dash). When set, the yellow warning light should come on 1 meter before the overload comes into action. The little brass screws used for adjusting are very fine and do not actual screw in or out and may require a considerably amount of turning to reach the setting points.

Over load stuck on, boom will not come down or out, green light on in the middle of circuit box and the red and yellow light out.

Take brown and black wire off bottom board and try machine, if machine works, replace wire and tap the orange box on the same part of the board lightly (the circuit may be stuck).

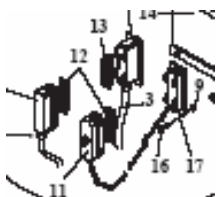


Auxiliary Wiring Lay outs



Plug into boom

Has approx. 24 wires all black all numbered 1-24. These numbers match up with numbers in the plug and are fitted 1-1, 2-2, 3-3 etc.



Dummy plug on head stock wiring.

Position 11 is looped to position 18

“	14	“	17
“	15	“	16
“	22	“	23

Plug on Winch on older Pegasus

Red goes to 2
Black goes to 3
Purple goes to 18
Blue goes to 11

BEK6095/LE Radio remote control in basket.

Plug to head stock,

Wire Plug

1 + 4 go to position 1
2 goes to 2 + earth looped to 4
3 goes to position 16
5 goes to position 6
6 goes to position 17

Plug on winch 3.8T, 2.5T, 1.2T and 0.6T

Wire -- Plug

Red -- position 3

Black -- position 4

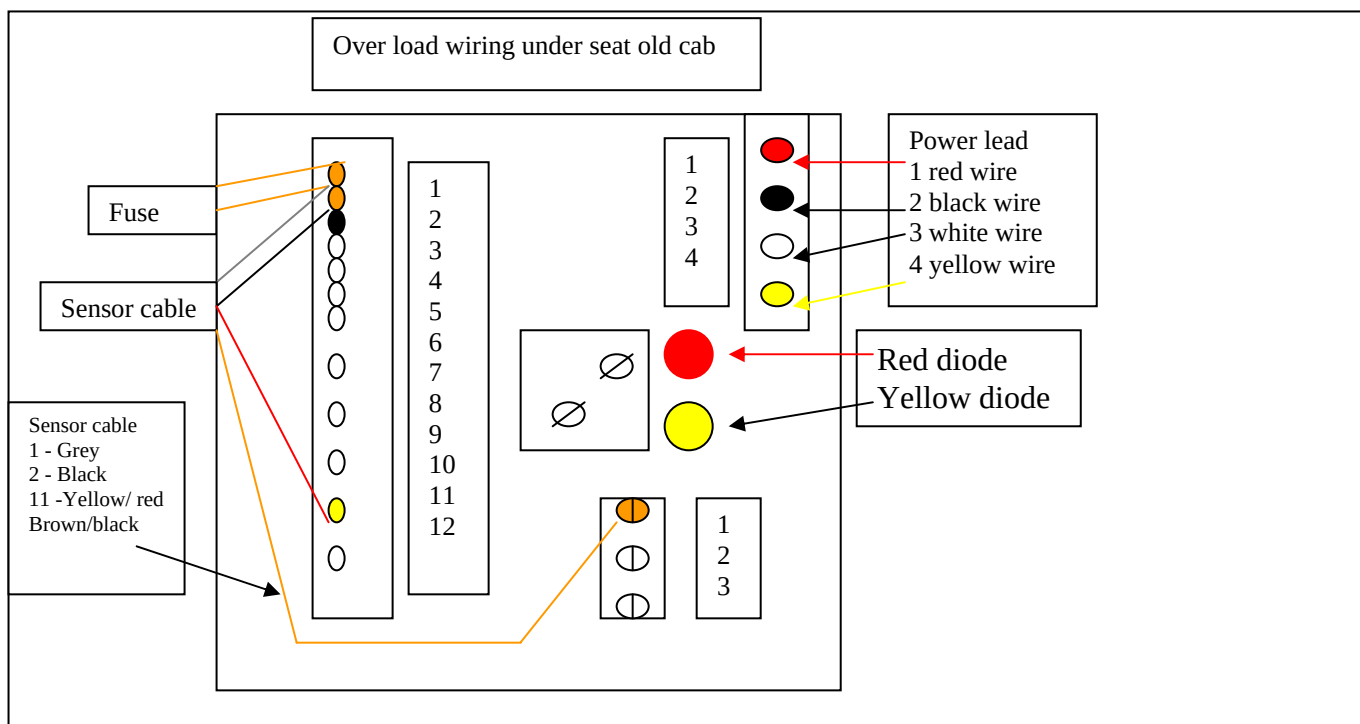
Loop wire -- positions 1, 6, 16

0.6T

loop wire -- positions 1, 6, 7, 16

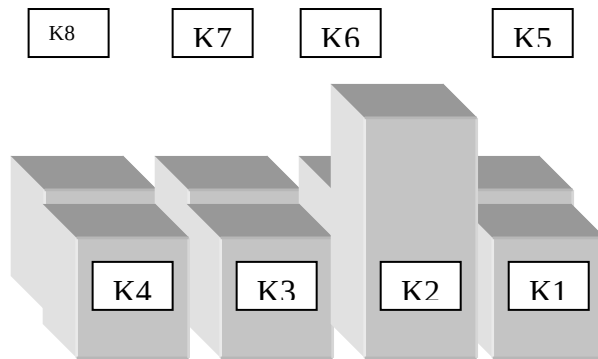
Blue and brown -- joined in a connector

Over load wiring under seat old cab



Relays in dash Old Cab Machine

K1 Starting motor
 K2 Timer
 K3 main beam
 K4 forward reverse
 K5 seat safety
 K6 reverse buzzer
 K7 anti tipping
 K8 anti tipping



Air conditioner gas charge procedures

Vacuum for ½ hour the compressor check for leaks, add 50 grams of oil, fill with 850 g of R134 gas (or any other gas used for car air conditioners).

Electrical connection under the seat:

3 plugs

N 1- 2 wires plug (1 Black, 1White & Red)

N 2 – 4 wires plug: from machine: 2 Brown , 1 Red & Green, 1 Black

I	I	I
Blue	Green	Black

N 3 – 4 pin plug with 3 wires only : Black, Gray & Black, Gray & Yellow

I	I	I
Black	Blue	Red

Basket Control 14m Prearranged Machine

On machines with Danfoss system the speed on the ram is controlled by the joy stick (in how far you push it)
 On machines without Danfoss and have the yellow control box with push button controls the speed of the ram
 action is controlled by a valve beside the main distributor behind the panel under the right hand cab window.

Derek Howarth Iveco UK ph. 01606 541031 fax 01606 541124

Engine Torque settings old Iveco 8045-SE.00.7.00 engine

Con. Rod stud	1 st step 40Nm	2 nd step 60 degrees	
Main brg stud	1 st step 80 Nm	2 nd step 90 degrees	
Flywheel studs	1 st step 40Nm	2 nd step 60 degrees	
Front pulley nut	294Nm		
Head	1 st step 70 Nm	2 nd step 90 degrees	3 rd step 90 degrees
Compression pressure	At 200 rpm	16 bar	
Injector nozzle calibration	260 bar		
Injector protrusion	0.3 mm-1.1mm		
Tappet setting	0.30 mm	Cold or hot	Inlet and exhaust
Cam lift	5.67		
Valve guide dia.	Inside 8.023-8.043	Outer 13.993-14.016	
Valve depth below head	Inlet 0.7-1.0	Outlet 0.7-1.0	
Thermostat on/off	79 degrees		
Turbo charger	Garrett		
Oil pressure	Minimum 0.7 bar	Maximum 2.5 bar	
Injection pump type	VE4 / 12F 1150 L 782		
Firing order	1-3-4-2		
Camshaft diameter	1= 51.000	2 = 50.500	3= 50.000
Crankshaft trust washers	3.378 – 3.429		
Crankshaft end float	0.082 – 0.334		
Brg under size range	1 st = 0.254	2 nd = 0.508	3 rd = 0.762
Main brg housing dia	84.200 – 84.230		
Main journal dia std.	79.791 – 79.810	Big end dia std	63.725 – 63.744
Big end con rod bore	67.407 – 67.422	Small end bore dia	38.004 – 38.014
Cylinder dia	104.000		
Piston clearance in cly	0.174 – 0.212		
Piston protrusion	0.335 – 0.761		
Piston dia at skirt	103.812 – 103.826		
Compression ratio	16.5 : 1		
Cylinder capacity	3908 cm3		
Stroke	115mm		

New NEF Iveco Engine

F4BE - F4GE NEF ENGINES

SECTION 4 - OVERHAUL AND TECHNICAL SPECIFICATIONS 39

TIGHTENING TORQUE (FOR 4 AND 6 CYL.)

COMPONENT		TORQUE	
		Nm	kgm
Cooling Nozzles (M8x1.25x10)		15 ± 3	1.5 ± 0.3
Main bearing cap	1st stage	50 ± 6	5.0 ± 0.6
	2nd stage	80 ± 6	8.0 ± 0.6
	3rd stage	90° ± 5°	
Rear gear housing assembly (M8x1.25x40)		24 ± 4	2.4 ± 0.4
(M8x1.25x25)		24 ± 4	2.4 ± 0.4
(M10x1.5)		49 ± 5	4.9 ± 0.5
Oil pump (M8x1.25x30)		8 ± 1	0.8 ± 0.1
Front cover assembly (M8x1.25x45)		24 ± 4	2.4 ± 0.4
(M8x1.25x30)		21 ± 4	2.4 ± 0.4
Connecting rod bolts (M11x1.25)	1st stage	30 ± 3	3.0 ± 0.3
	2nd stage	60 ± 5	6.0 ± 0.5
	3rd stage	60° ± 5°	
Ladder frame assembly (M10x1.25x25)		43 ± 5	4.3 ± 0.5
Oil rifle plugs (M10x1)		6 ± 1	0.6 ± 0.1
(M14x1.5)		11 ± 2	1.1 ± 0.2
Assemble oil suction tube (M8x1.25x20)		24 ± 4	2.4 ± 0.4
Oil pan assembly (M8x1.25x25)		24 ± 4	2.4 ± 0.4
(M18x1.50)		60 ± 9	6.0 ± 0.9
Set timing pin		5 ± 1	0.5 ± 0.1
Fuel pump assembly			
M8 screw		24 ± 4	2.4 ± 0.4
M6 screw		10 ± 1	1.0 ± 0.1
M6 nut		10 ± 1	1.0 ± 0.1
M10x1.5 flange head nuts	pre-torque	10 - 15	1.0 - 1.5
	Final torque	50 - 55	5.0 - 5.5
Fuel pump gear (drive gear nut)	Snug torque	15 - 20	1.5 - 2.0
	Final torque	85 - 90	8.5 - 9.0
Timing pin cap of fuel pump		30 - 35	3.0 - 3.5
Rocker assys (M8)		24 ± 4	2.4 ± 0.4
Cylinder head bolts (M12x70)		50 + 90°	5.0 + 9.0°
(M12x140)		40 + 180°	4.0 + 18.0°
(M12x180)		70 + 180°	7.0 + 18.0°
Assy rocker covers (M8x1.25x25)		24 ± 4	2.4 ± 0.4
Intake manifold (M8x1.25)		24 ± 4	2.4 ± 0.4
Assy air intake connection (M8x1.25)		21 ± 4	2.4 ± 0.4
Oil bypass valve into lube filter head (M22x1.5x10)		80 ± 8	8.0 ± 0.8
Plug (M12x1.5x12)		10 ± 1	1.0 ± 0.1
Exhaust manifold (M10x1.5x65)		43 ± 6	4.3 ± 0.6
Water pump (M8x1.25x25)		24 ± 4	2.4 ± 0.4
Water outlet connection (M8x1.25x35)		24 ± 4	2.4 ± 0.4
(M8x1.25x70)		24 ± 4	2.4 ± 0.4
Fan support (M10x1.5x20)		33 ± 5	3.3 ± 0.5
Fan pulley (M6)		10 ± 2	1.0 ± 0.2
(M10)		43 ± 6	4.3 ± 0.6

40 SECTION 4 - OVERHAUL AND TECHNICAL SPECIFICATIONS

F4BE - F4CE NEF ENGINES

COMPONENT	TORQUE	
	Nm	kgm
Rear lifting brackets (M12x1.75x30)	77 ± 12	7.7 ± 1.2
Crankshaft pulley (M12x1.75x10.9)	110 ± 5	11.0 ± 0.5
Flywheel housing (M12x120)	85 ± 10	8.5 ± 1.0
(M12x80)	85 ± 10	8.5 ± 1.0
(M10x80)	49 ± 5	4.9 ± 0.5
(M10x40)	49 ± 5	4.9 ± 0.5
Flywheel housing (M12x1.25)	30 ± 4	3.0 ± 0.4
1st stage		
2nd stage	60° ± 5°	
Assy rear cover plate to flywheel housing (M8x1.25x16)	24 ± 4	2.4 ± 0.4
Fuel injectors	60 ± 5	6.0 ± 0.5
Fuel lift pump	24 ± 4	2.4 ± 0.4
Turbocharger to exhaust manifold (M10)	43 ± 6	4.3 ± 0.6
Oil feed to oil filter head	24 ± 4	2.4 ± 0.4
Oil feed to turbocharger (M12x1.5)	35 ± 5	3.5 ± 0.5
Oil drain (M8x1.25x16)	24 ± 4	2.4 ± 0.4
Alternator to alternator support (M8x1.25x30)	24 ± 4	2.4 ± 0.4
Alternator to water inlet conn. assy (M8x1.25x30)	24 ± 4	2.4 ± 0.4
Lower alternator mounting (M10x1.25x25)	24 ± 4	2.4 ± 0.4
Alternator upper pivot to support (M10)	49 ± 5	4.9 ± 0.5
Alternator mounting hardware (M12x1.75x120)	43 ± 6	4.3 ± 0.6
Alternator wiring (M6x1.0 nut)	10 ± 2	1.0 ± 0.2
Starter motor to gear case (M10)	49 ± 5	4.9 ± 0.5
Screw M8 for fastening cylinder barrel lubricating nozzles	15 ± 3	1.5 ± 0.3
Screw M12 for fastening output shaft caps	50 ± 6	5 ± 0.6
1st stage		
2nd stage	80 ± 6	8 ± 0.6
3rd stage	90° ± 5°	
Screw M8 for fastening camshaft longitudinal retaining plate	24 ± 4	2.4 ± 0.4
Screw M8 for fastening camshaft gear	36 ± 4	3.6 ± 0.4
Screw M11 for fastening connecting rod caps	60 ± 5	6 ± 0.5
1st stage		
2nd stage	60° ± 5°	

New Iveco Engine NEF family

19/11/04:

IVECO NEW ENGINES:

NEF-NA-60 KW → NON TURBO ENGINE**NEF-TC-74 KW → TURBO ENGINE****NEF-TCA-88 KW → TURBO INTERCOOLER ENGINE**

PEGASUS - DEUTZ NEW ENGINE:

BF4M2012C 103 KW → TURBO ENGINE

Filters used on Dieci Machines and prices**Agri, Runner, Icarus, Samson, Deadlus and Pegasus (old cab)**

Hydraulic (screw on) x1	BHC3012
Hydraulic (in the tank) x 2	BHC0105
Engine oil (turbo engine) x1	1F.1902047
Engine oil (non turbo) x1	1F.1901603
Fuel x 2	1F.1930010
Air filter outer (turbo engine) x1	1F.8014390
Air filter inner (turbo engine) x1	1F.8015449
Air filter outer (non turbo) x1	1F.8015448
Air filter inner (non turbo) x1	1F.8014430

Mixer engine as above

Hydraulic filter x 2 BHC3008

Dumper engine as above

Hydraulic filter x 1 BHC3008

NEW CAB MACHINES

1L.2175046	Fuel filter	1
BHC5030	Pre fuel filter	1
BHC5029	Inner air filter	1
BHC5028	Outer air filter	1
BHC5032	Engine oil filter	1
BHC3012	Hydraulic filter	1
BHC0105	Hyd filter in tank	2

New Cab All Models

3E.1606007V-C	Top door glass
3E.1606001V-B	Windscreen glass
3E.1606003V-C	Right hand side glass
3E.1606002V-B	Open able roof glass
3E.1606008V-A	Fixed door glass
3E.1606004V-B	Glass behind door
3E.1606006V-A	Rear window glass
4C.114014	Ignition key
3E.31408	Inner door handle
3E.31336	Outer door handle
3E.31407	Inner door lock

Icarus, Runner, Samson, Zeus New cab

1F.1930010	Fuel filter	1
BHC5029	Inner air filter	1
BHC5028	Outer air filter	1
BHC5031	Engine oil filter	1
BHC3012	Hydraulic filter	1
BHC0105	Hyd filter in tank	2
1F.504013617	Engine Belt	1
1F.504031929	Starter motor	1

Dedalus 26-6

1F.1930010	Fuel filter	1
BHC5031	Engine oil filter	1
BHC3012	Hydraulic filter	1
BHC0117	Hyd filter outside tank	1
1F.8015449	Inner air filter	1
1F.8014390	Outer air filter	1
1F.504013617	Engine Belt	1
1F.504031929	Starter motor	1

Dedalus 28-7, Dedalus 30-7

BHC0107	Hyd filter in tank	1
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Recommended oils for Dieci Machines

Engine	15/40
Hydraulic oil	CL46 <u>Do Not Use Synthetic Oil</u>
Axle and gearbox	SAE 85W90
Brake Fluid	Dextron 2 (ATF)
Grease	Super Grease G2

Service schedule for Agri Deadlus Runner Icarus and Samson Zeus

Group	Description	Period in hours					
		80	400	800	1200	Capacity	
Engine	Replace engine oil Replace engine oil filter Clean air filters Replace air filters	*	*	*	*	9 litres	
Fuelling system	Replace fuel filter Clean fuel pump filter	*	*	*	*	145 litres	
Cooling system	Check coolant level Replace coolant	*	*	*	*	14 litres	
Hydraulic and Transmission Circuit	Check levels Replace oil in system Replace external filter Replace internal filter	*	*	*	*	126 litres	
Transmission Pump	Replace oil In pump		*	*	*	4 litres	
Transmission Motor	Replace oil in motor		*	*	*	4 litres	
Electric circuits	Check battery electrolyte level Check alternator belt	*	*	*	*		
Differential axle and gearbox	Check oil level in sump Replace oil in sump Check oil level in hubs Replace oil in hubs Check gear oil level Replace gear oil level Tighten wheel nuts	*	*	*	*	8 litres	
Various	Check tyre pressures Check turret rotation oil level Change turret rotation oil Check brake oil level Change brake oil level Check accelerator oil level Change accelerator oil Grease all points Check turret motor bolts Check wear pads Check Parking Brake Check Lights Check Hyd Hoses	*	*	*	*		
Replace	Crystals bag in Turret			*			
Filters used in Pegasus 25m		Labour charges					
1L.2175046	Fuel filter	1	Short service takes 3 hours Major service at 1200 hours takes 4.5 hours				
BHC5030	Pre fuel filter	1					
BHC5029	Inner air filter	1					
BHC5028	Outer air filter	1					
BHC5032	Engine oil filter	1					
BHC3012	Hydraulic filter	1					
BHC0105	Hyd filter in tank	2					

Service and maintenance schedule for Dieci Icarus Runner Dedalus Zeus Samson

Group	Description	Period in hours						
		80	350	650	1000	2000	Capacity	
Engine	Replace engine oil	*	*	*	*	As the first 1000	9 litres	
	Replace engine oil filter	*	*	*	*			
	Clean air filters	*	*	*	*			
	Replace air filters as needed				*			
Fuelling system	Replace fuel filter	*	*	*	*		145 litres	
	Clean fuel pump filter				*			
Cooling system	Check coolant level	*	*	*	*		14 litres	
	Replace coolant				*			
Hydraulic and Transmission Circuit	Check levels	*	*	*	*		126 litres	
	Replace oil in system				*			
	Replace external filter		*	*	*			
	Replace internal filter				*			
Transmission pump	Replace oil in pump		*	*	*		4 litres	
Transmission motor	Replace oil in motor		*	*	*		4 litres	
Electric circuits	Check battery electrolyte level	*	*	*	*			
	Check alternator belt	*	*	*	*			
Differential axle and gearbox	Check oil level in sump				*		8 litres	
	Replace oil in sump				*			
	Check oil level in hubs				*			
	Replace oil in hubs				*			
	Check gear oil level				*			
	Replace gear oil				*			
	Tighten wheel nuts	*	*	*	*			
Various	Check tyre pressure	*	*	*	*			
	Check brake oil level	*	*	*	*			
	Change brake oil				*			
	Grease all points	*	*	*	*			
	Check Wear Pads	*	*	*	*			
	Check Lights	*	*	*	*			
	Check Hydraulic Piping	*	*	*	*			
	Check Safety equipment	*	*	*	*			
	Check Parking brake	*	*	*	*			

Icarus Dedalus Runner Samson Zeus

Old Cab

New Cab

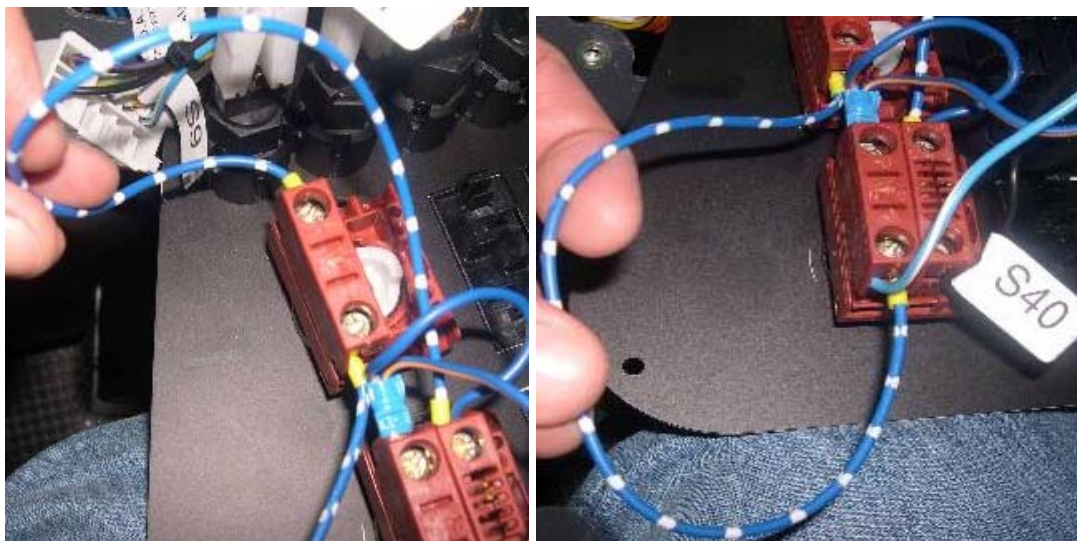
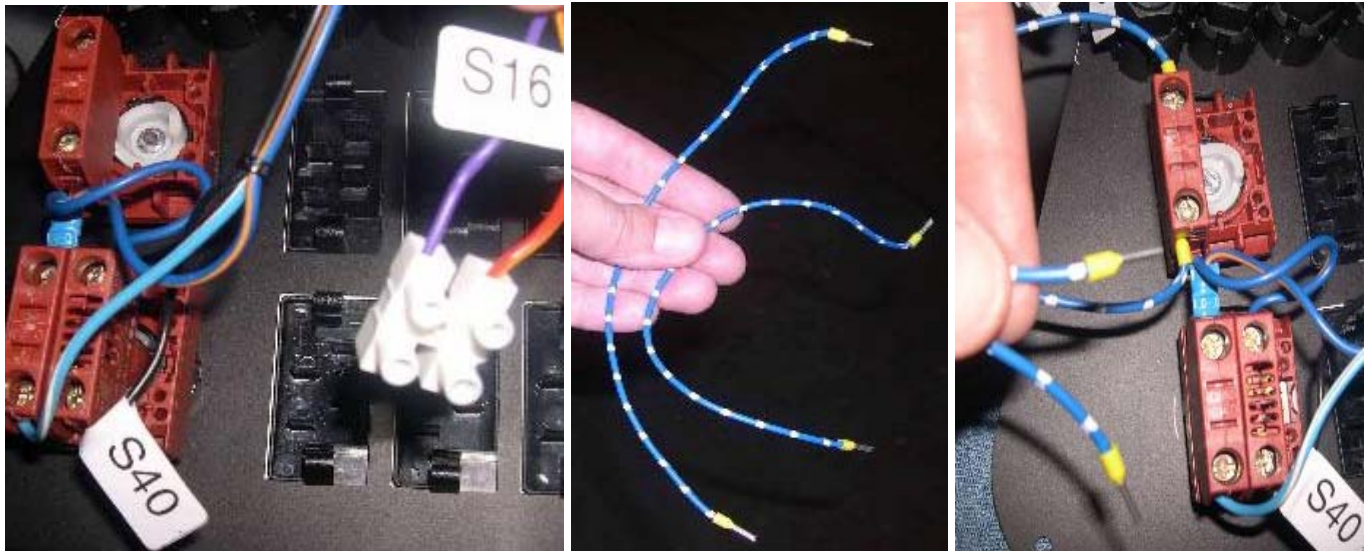
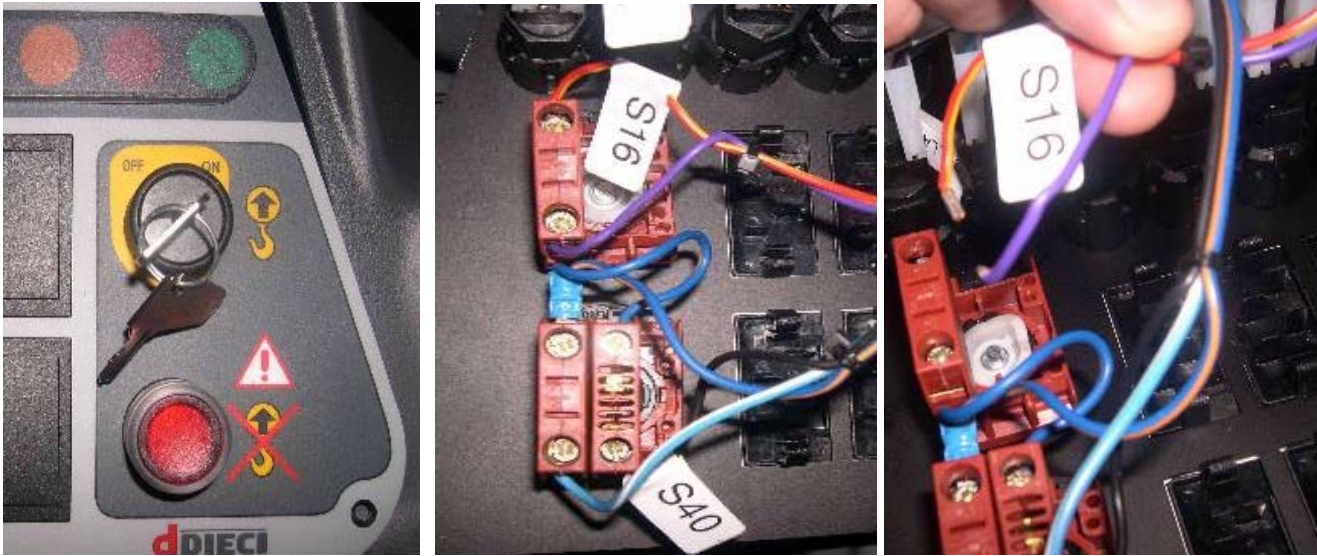
1F.1930010	Fuel filter	1	
BHC5029	Inner air filter	1	
BHC5028	Outer air filter	1	
BHC5031	Engine oil filter	1	
BHC3012	Hydraulic filter	1	
BHC0105	Hyd filter in tank	3	

Hydraulic (screw on)	x1	BHC3012
Hydraulic (in the tank)	x 2	BHC0105
Engine oil (turbo engine)	x1	1F.1902047
Engine oil (non turbo)	x1	1F.1901603
Fuel	x 2	1F.1930010
Air filter outer (turbo engine)	x1	1F.8014390
Air filter inner (turbo engine)	x1	1F.8015449
Air filter outer (non turbo)	x1	1F.8015448
Air filter inner (non turbo)	x1	1F.8014430

 ASAMM	ENGINE OIL  OLIO MOTORE	HYDRAULIC OIL  OLIO IDRAULICO	AXLES AND GEARBOX OIL  OLIO PONTI CAMBIO	BRAKE FLUID  OLIO FRENI	COOLING FLUID  RADIATORE	GREASE  GRASSO
AGIP	SIGMA TURBO	ARNICA/46	SAE85W90 (API GL5-MIL2105-B)	DEXRON 2	PERMANENT EXTRA	GR MU/EP2
CHEVRON	DELO 460 15W40	EP HYDRAULIC /46		DEXRON 2	ANTIFREEZER	DURALITH EP2
ESSO	ESSOLUBE XT 201	INVAROL EP46		ATF DEXRON 2	SIGIL GREEN	BEACON EP2
IP	TAURUS TURBO 15W40	HJDRUS HL46		DEXRON FLUID 2	ANTIFREEZER	ATHESIA EP GREASE2
MOBIL	DELVAC SUPER 1300	HJDRUS HV46		ATF 220	ANTIFREEZER	MOBILUX 2
Q 8	T700 SAE 15W40	HAENDEL 46		AUTO 14	ANTIFREEZER	SUPER GREASE G2
SHELL	RIMULDA D	TELLUS T46		ATF DEXRON 2	ANTIFREEZER	SUPER GREASE G2
ROLOIL	DOLOMITI SUPER HD TURBO 15W40	LI/46		HIDROMATIC DEX	ROL FLUID	LITEX EP2
TEXACO	URSA SUPER TD	RANDO HD Z 46		DEXRON 2	ANTIFREEZER	MULTIFAK EP2
TOTAL	RUBIA XT	EQUIVIS ZS/46		DEXRON 2	ANTIFREEZER	MULTIS EP2

FOR THE PRODUCT CONSUMPTION AMOUNTS, CONSULT THE CAPACITY OF PARTS FOR LUBRICATION IN CHAPTER "H" (TECHNICAL DATA AND VEHICLE TECHNICAL FEATURES)

This is the procedure to cut out the overload from stopping the boom movements but still maintain the overload monitor



Follow the instructions to eliminate the need for the over ride button

Remove the two wires from the key switch S16 and isolate them. Take two new wires and connect them into the key switch S16 Then proceed to connect the other ends into the red button switch S40 as shown. With this done you should be able operate the machine with the over load on but not cutting out the boom movements when the red lights come on the overload monitor. The green lights should indicate the state of safety but it will be the operator who controls when to stop lowering or extending as is safe.

Greasing Points



TE mod. S.I.R., Dedalus and Zeus

**MAINTENANCE
ADJUSTMENTS**

TELESCOPIC ARM - BOOM (GREASING)

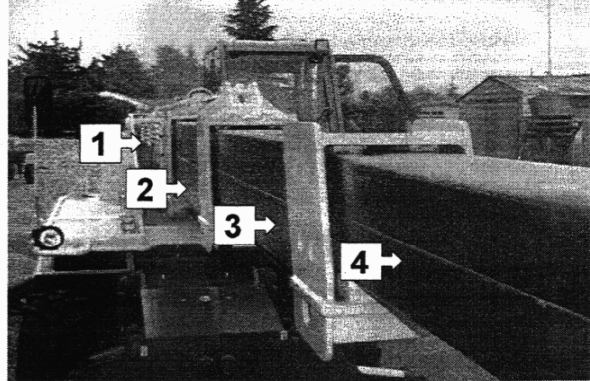
The vehicle boom is divided into the following parts:

- 1°- outer arm
- 2°- middle arm "A"
- 3°- middle arm "B"
- 4°- inner arm "C"

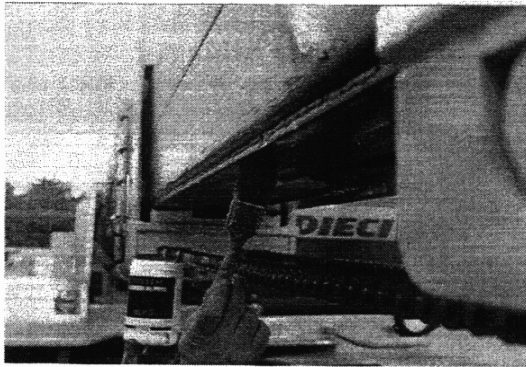
The arms slide along antifriction sliding blocks made of teflon.

Consult the Summary Table at the beginning of this chapter to know how often these should be tightened (pag. D/5)

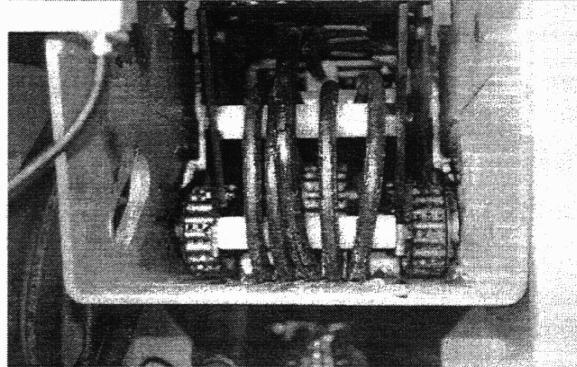
(Sliding block torque 6 Kgm).



(fig.40/D)



(fig.41/D)



(fig.42/D)

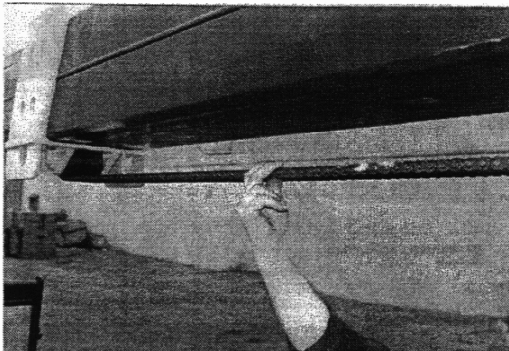
Clean and grease the boom sliding blocks.

This should be carried out every 20 working hours for the first 60 working hours. Consult the Summary Table at the beginning of this chapter to know how often this should then be done (pag. D/5).

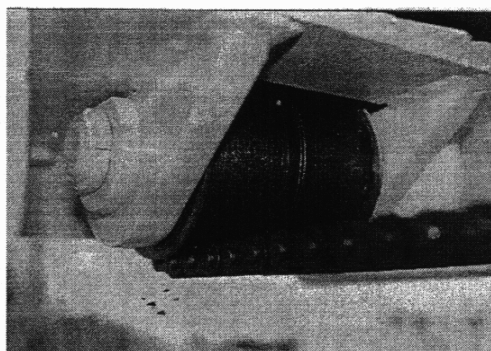
Extend the boom completely (fig.40/D) using a brush, apply a layer of grease (see the table for oils and grease) to all 4 sides of the arms "A" "B" "C". Open and close the boom several times to distribute the grease evenly.

- Remove any excess grease.

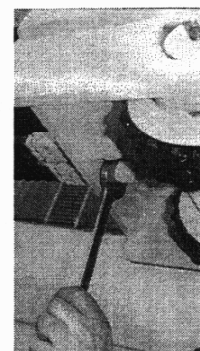
- With the boom extended, lubricate the 4 inner sides of the outer arm from the rear part of the boom using a brush with a long handle (fig.42/D).



(fig.43/D)



(fig.44/D)



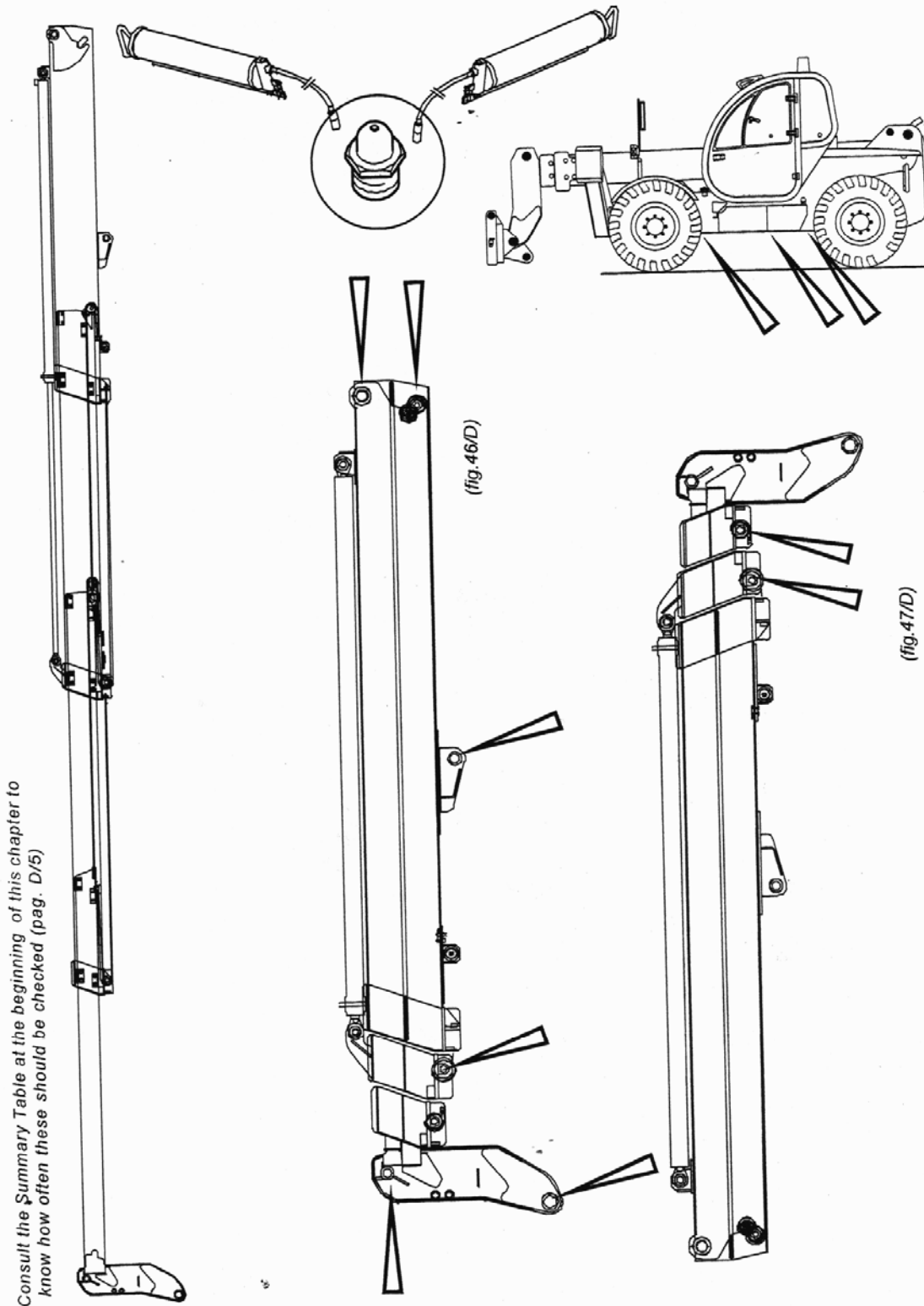
(fig.45/D)

Rollers and chains for extending and closing the boom.

Consult the Summary Table at the beginning of this chapter to know how often these need tightening and how often they wear out (pag. D/3) (Small chain torque 5 Kgm large chain 8 Kgm).



PARTS TO BE LUBRICATED WITH GREASE



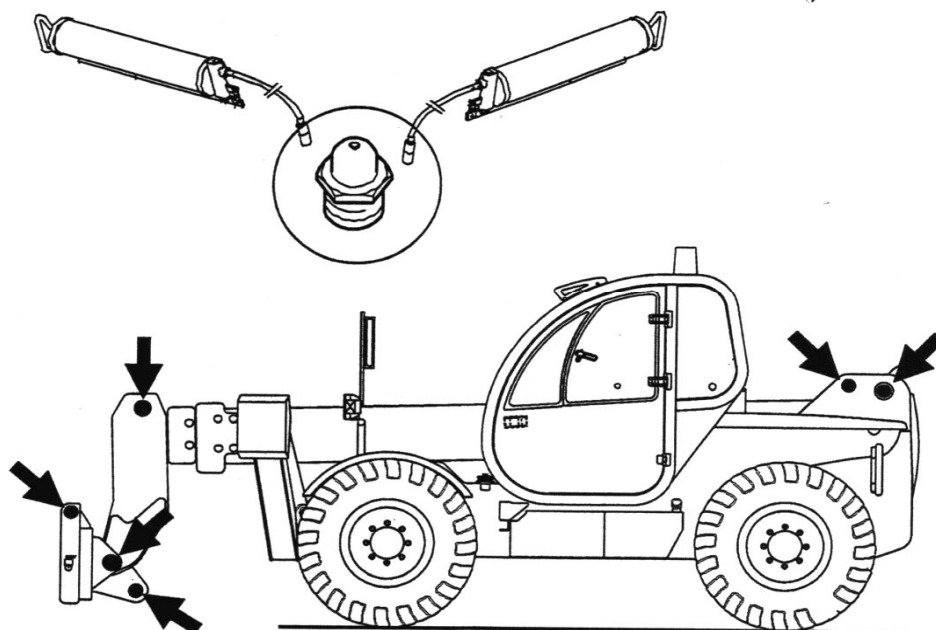
Consult the Summary Table at the beginning of this chapter to know how often these should be checked (pag. D/5)

ATTENTION - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and of your vehicle.

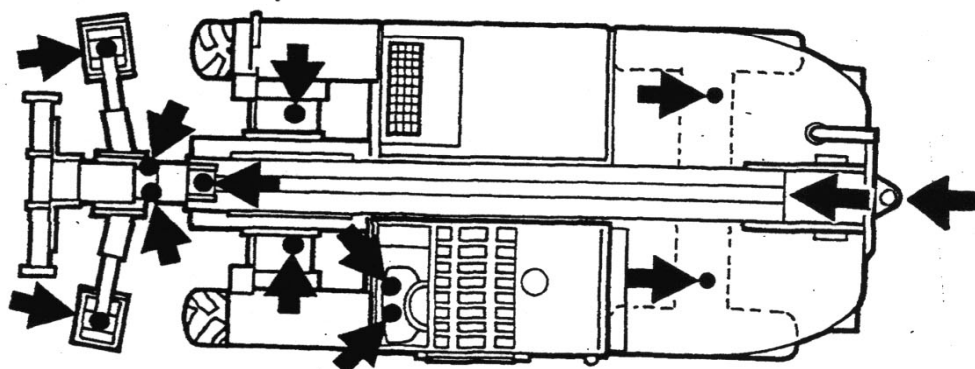


TE mod. S.I.R., Dedalus and Zeus

**MAINTENANCE
ADJUSTMENTS**



(fig.48/D)



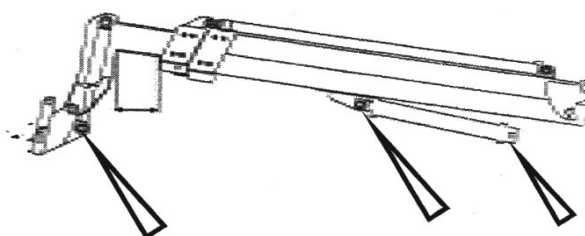
(fig.49/D)

RETIMING THE BOOM

Only for vehicles with telescopic arms with 2 extensions.

! ATTENTION: if the telescopic arm is out of timing (fig.64/D), press the push-button located on the joystick, for the extension retraction and the arm will automatically be retimed. (Retract the 2° extension completely) If the problem persists, contact Dieci service.

! ATTENTION: if the timing is out by more than 40mm as illustrated, there is a risk that the hydraulic and electric tubes and cables inside the arm may break.



(fig.64/D)

OILERS

(fig.46/D) - Oilers on right-hand arm (3 extensions):

- oilers for arm articulation pin (1 place)
- oilers for jack foot and head pins for horizontal movement (2 places)
- oilers for jack foot and head pins for lifting (2 places)
- oilers for movement of attachment holding plate (1 place)
- oilers for arm rollers and chains (1 front place 3 rear places on inner arm)

(fig.47/D) - Oilers on left-hand arm:

- oilers for movement of attachment holding plate (1 place)
- oilers for arm rollers and chains (2 places)

(fig.48/D) Arm oilers for 1 or 2 extensions

(fig.49/D) Oilers on front and rear stabilizers:

- oilers for jack foot and head pins for stabilizing feet (4 places)
- oilers for fulcrum arms on stabilizing feet (4 places)

(fig.50/D) Oilers for spiders and cardan joints on transmission shafts (6 places).

TRANSMISSION SHAFTS

Consult the Summary Table at the beginning of this chapter to know how often this should be done (pag. D/5).

Grease the places shown until the grease spills out.

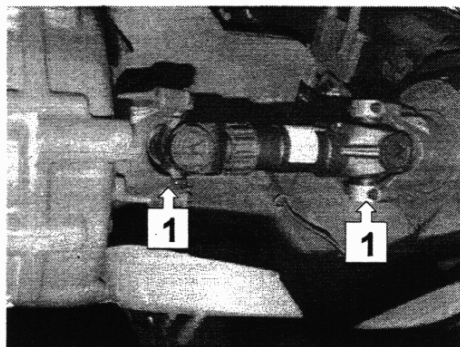


ATTENTION: Check that nuts and bolts are tightened on the shaft coupling flanges.

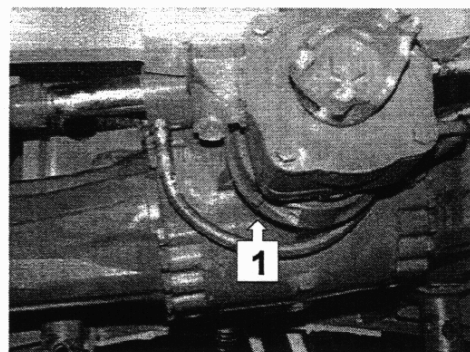
(fig.51/D) Oilers for oscillation of rear and front axle. (4 places)

(fig.52/D) Oilers for articulated pins (PIVOT) on front and rear wheels. (8 places)

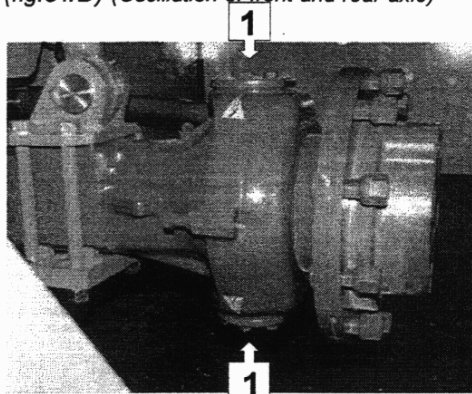
(fig.46/D) Oilers for jack foot and head pins for leveling (2 places).



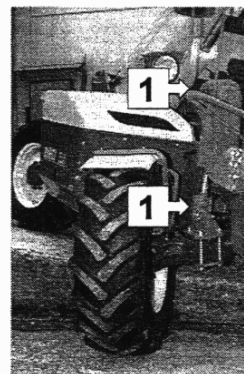
(fig.50/D) (Transmission shafts and cardan joints)



(fig.51/D) (Oscillation of front and rear axle)



(fig.52/D) (Articulated pins "PIVOT")



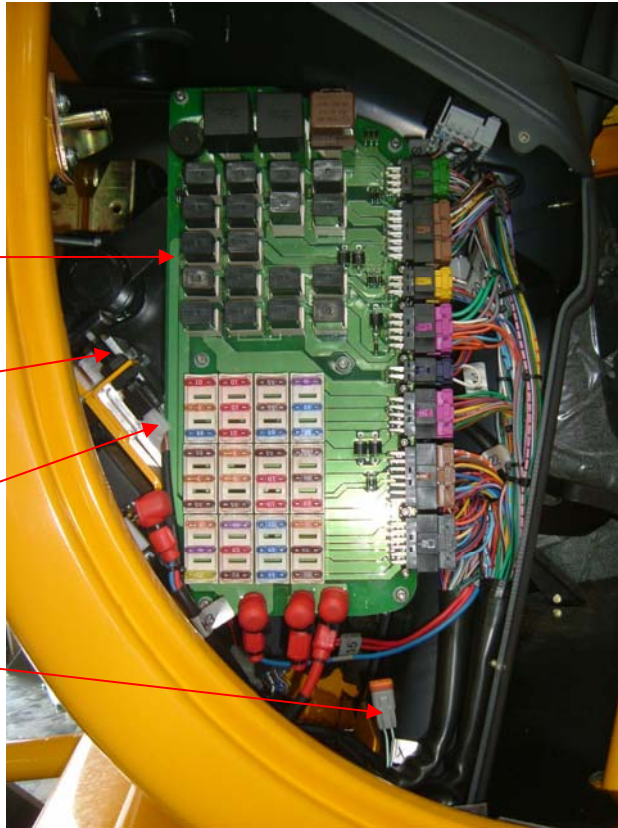
(fig.53/D) (Levelling cylinder)

ATTENTION - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and of your vehicle.

If you want machine to drive while turret is at 90 degrees remove this diode it is the second one down in this position

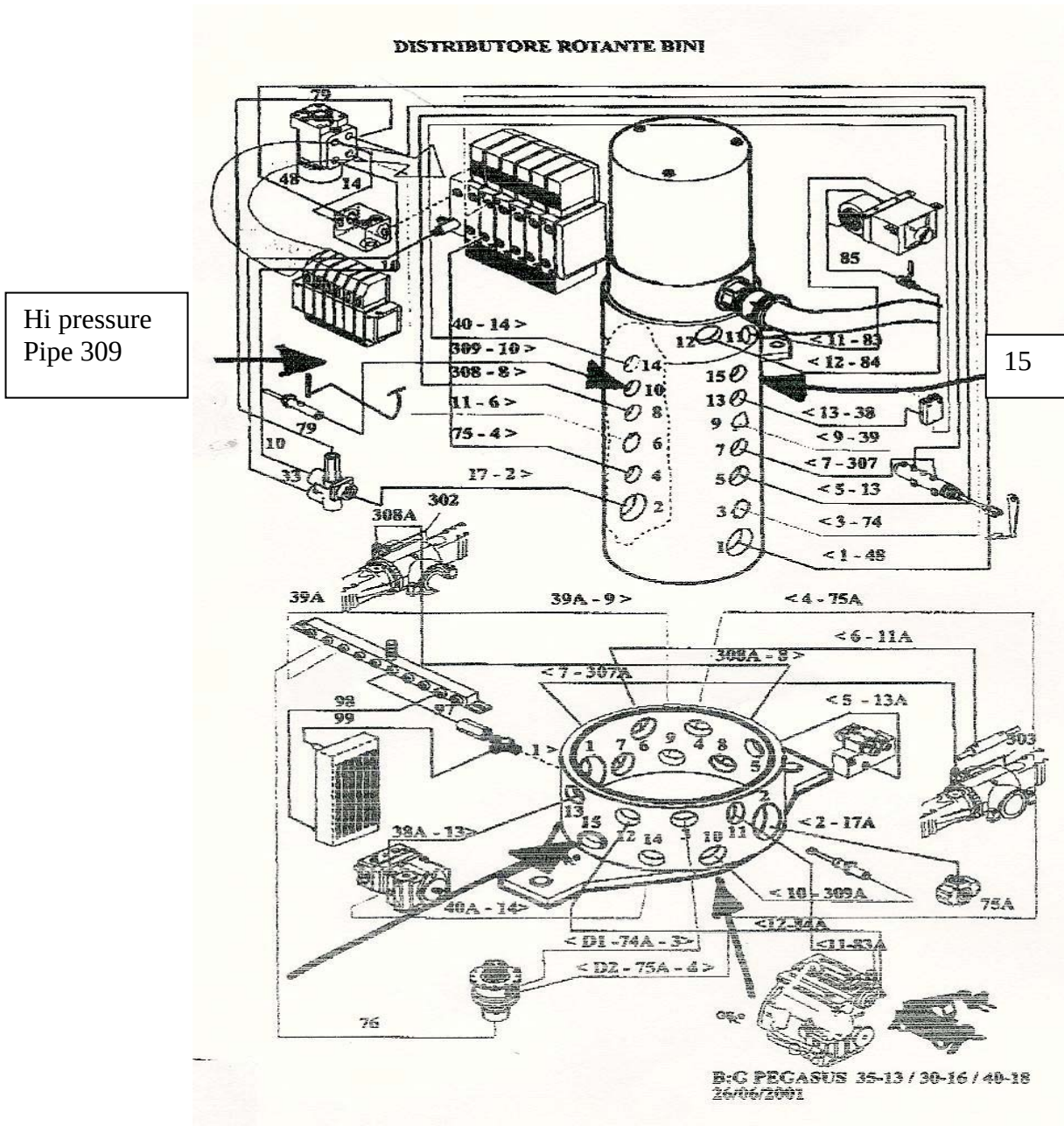
This switch is operated by inching pedal to give power to the range change switch. Pedal depressed power to switch, pedal up no power to switch

This plug is used to set the over load system on the fixed post machines (does not be used on the Pegasus models). Plug a connector on this wire that joins these wires together.



Pegasus losing oil from the foot throttle reservoir

If there is oil coming [over flowing] from the reservoir in the cab it will be from a high pressure line in the turn style, which is leaking across into the low pressure line of the foot throttle. Take the plate of under the boom that is above the turn style distributor and you will find the low pressure line from the throttle master cylinder goes into the distributor at the rear, on pipe number 309. Take this pipe with union and transfer it to the front side of distributor to position no. 15 which is the second place down from the top take the plug out of this and put into position number 10 which is where you removed the throttle pipe from. Put the throttle pipe and union into this position number 15. Do the same procedure with the bottom end of the distributor. Take the pipe from number 10 and fit into number 15.



Pegasus

3 wires in each solenoid plug. 1. black earth , 2. Purple 12volts live when trigger pulled on joystick and the engine is running. 3. Individually coloured wire that has 6volts when engine running and trigger is pulled on joystick, changes as solenoid is operated, to extend a ram it will rise to 9volts. To retract a ram it will fall to 3volts. When engine not running and ignition on or off, there will be no power at this plug.

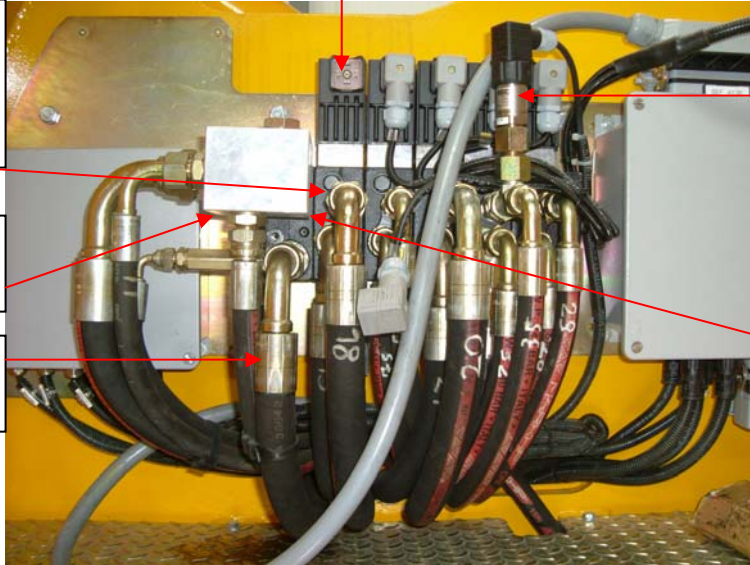
13mm bolt is a shock valve (ball and Spring) 2 in each slice. Check if movement is jerky.

These pipes go to dump from this manifold

Live pipe pressure into distributor

Transducers for tilt ram is mounted here and directly under this one whereas the transducers for the lift ram is fitted on check valve at ram

Relief valve is situated just behind manifold and just above visible allen key. The relief valve is an allen key it self and is set at 260 bar. This is for the distributor not for the individual pumps.



Jackleg Distributor

Control valve for the jack legs in that it sends hyd pressure to the distributor to work jacks normally power goes to main distributor

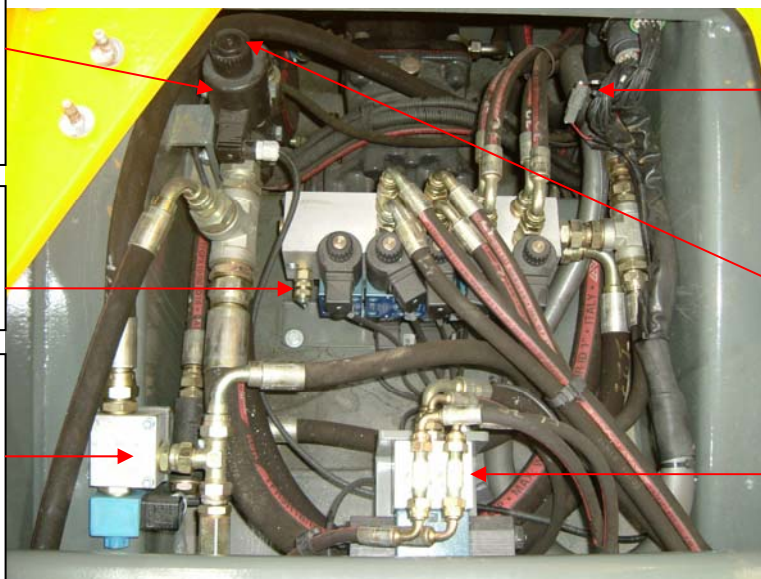
Test point for main pump 170 bar for all operations on lower turret.

This valve controls the high pressure for the upper turret 260 bar by allowing the second pump to put pressure into the system by shutting the dump pipe

If there is any spare wires going through the turret they will be found here in the form of a loose plug.

By pushing button in the top of this solenoid you can test valve. In is pressure to jacklegs

Sway control valve



Joy Stick in Pegasus controls under seat in cab



Pegasus Boom Sensors

In frosty conditions switches can stick and give false readings

Switch on cab side of boom that reads the minimum height if it sticks you will not be able to extend the boom .

Switch on the cab side of boom that reads maximum height if it sticks you will not be able to lower boom.

Switch on the rear of boom on cross shaft behind yellow end cover if it sticks the jack legs will not work.

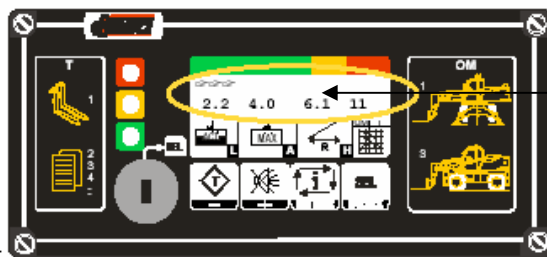
Sensor at rear of boom behind yellow cover that reads boom extension out extension if it is faulty will affect the basket control if a basket is attached. In the basket mode you will not be able to drive the machine.

Replacement of the boom's angle and extension reading cable reel Pegasus 3B6

1. Open cover from the old reel
2. Disconnect the 6 wires and remove the electrical cable
3. Remove the cable holder at the top of the boom
4. Remove the old reel
5. Place the new reel on side of the boom
6. Re-connect the electrical wires (see enclose diagram)
7. Close the cover
8. Put the boom at 0 degrees horizontal and fully retracted
9. Fix the steel cable at the boom's head
10. Remove the plastic strip holding the cable near the reel
11. Set the cable, by pulling it in or out, until you read 4.9 on the R position on the 3B6 display in the cabin
(See picture)
12. Verify that the machine works correctly.

SWITCHING THE MACHINE ON

At this stage, the display shows the page where the main readings are monitored.

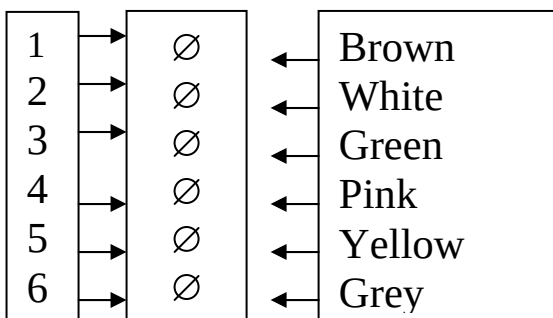


This page shows working data and conditions:

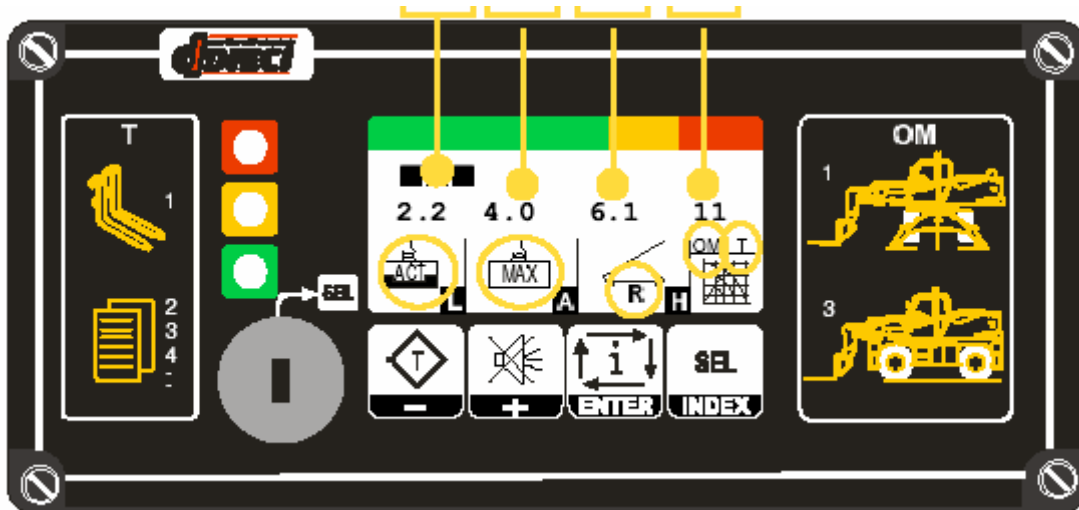
OM = Operating Mode (from external automatic Inputs)

T = Load Table corresponding to the last selected attachment.

Wiring diagram for wires in cable reel



Instructions for replacing (or repairing) the 3B6 cable winder



- First, secure the “surviving” cable in the appropriate ring at the head of the boom.
- Check to make sure that when the boom is completely extended, the cable is sufficiently long (if it is too short, replace the entire cable winder with a new one, paying attention to the electrical connections inside it).
- Position the machine on the stabilisers.
- Position the boom completely extended and completely raised (70° / 72° / 74° dependently from the model of Pegasus).

- Now you have to work on the display in the cabin. Enter into programming mode: switch the key on the starter panel off and then on again (the motor must be on); the data on the display will disappear.
- Wait a few seconds until the display shows the eeprom model (UM257 DIECI), then quickly press **ENTER** just once.

The page for setting the password should appear (CODE: 4477); if not, switch off the panel and start over again.

Above the numbers is an asterisk that can be moved using the **INDEX** key. When the asterisk is above a number, its value can be increased or decreased using the “+” and “-” keys.

Enter our password, i.e. **CODE: 4482** (« 3577 » with **UM394** if with **frontal carriage**), then press **ENTER**.

- At this point, the main page appears on the display. Use the “+” and “-” keys to go to the page for calibrating the boom in the maximum conditions: **13 Transd. Max**.

-Press **ENTER** and **INDEX** to confirm the calibration in machine open conditions.

- At this point, completely close and lower the boom (-4°) to calibrate it in its minimum conditions.

- Use the “+” and “-” keys to go to the page: **12 Transd. Min**.

-Press **ENTER** and **INDEX** to confirm the calibration in machine closed conditions.

- At this point you need to save the data. Use the “+” and “-” keys to go to the page **01 Save**, and press **ENTER** to activate the save command.

A message will indicate that the save operation is in progress: **Save in progress**.

At the end, the display shows the message: **Done**.

You have now finished. All you have to do is switch off and re-start the machine to exit from programming mode, then test for correct operation of the machine.

IMPORTANT NOTE: If the power supply is interrupted during the programming phase, all the unsaved data will be lost. It will therefore be necessary to repeat the operations from the beginning.

Likewise, if you realise that you have made an error, just switch the panel off and then on again and start from the beginning.

CALIBRATION OF THE EXTENSOMETER FOR A PORELLO BASKET CLASS 3

- ✓ Set the machine as it should work with the basket, **WITHOUT PUTTING ANY LOAD IN IT.**
- ✓ Open the top cover of the panel where the electric card is (the wires of the extensometer and of the electricity supply are connected to this card).

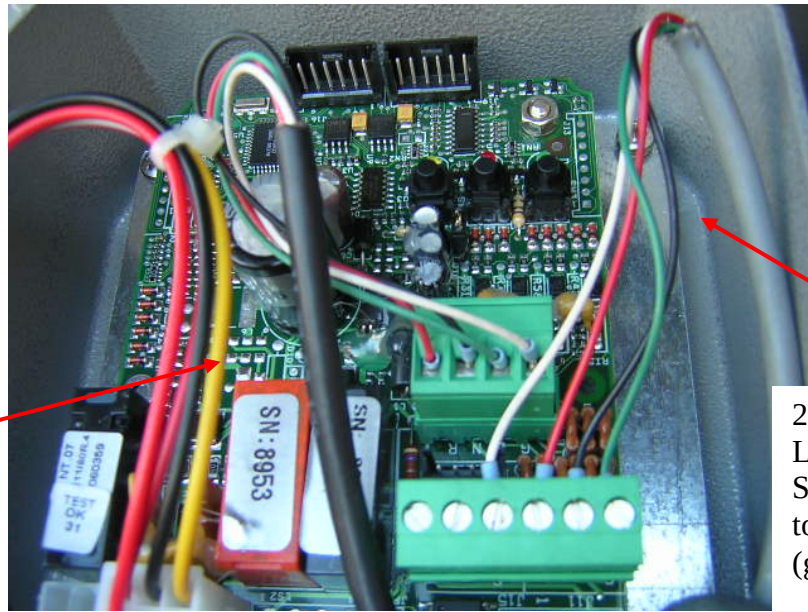


YELLOW LED	D21 (SWITCH SW1)
RED LED	D20 (SWITCH SW2)
GREEN LED	D19 (SWITCH SW3)

1. Switch on the machine, the **SW1** yellow led will start flashing.
2. Push **SW1**, the **SW2** red led will begin to flash, while the yellow one will be steady turned on.
3. Push **SW2**
4. Load the charge, which will have to be equal to the maximum load capacity of the the basket.
5. Push **SW3** (green led), the yellow led will be steady on and the red one will keep on flashing.
6. Push **SW1**, all led will be switched off. Calibration successfully completed.

CONNECTING LOAD SENSOR'S WIRES

1st
LOAD SENSOR
to be calibrated
(black covering)



2nd SECURITY
LOADING
SENSOR.
to be calibrated
(grey covering)

1st SENSOR

CARD

R	N	B	G
R	N	V	B

WIRES

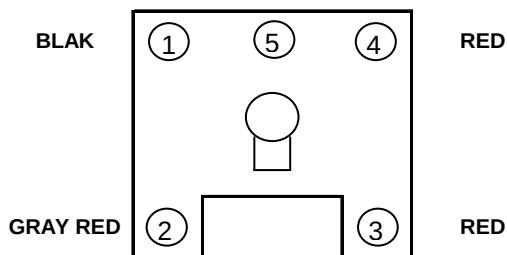
2nd SENSOR

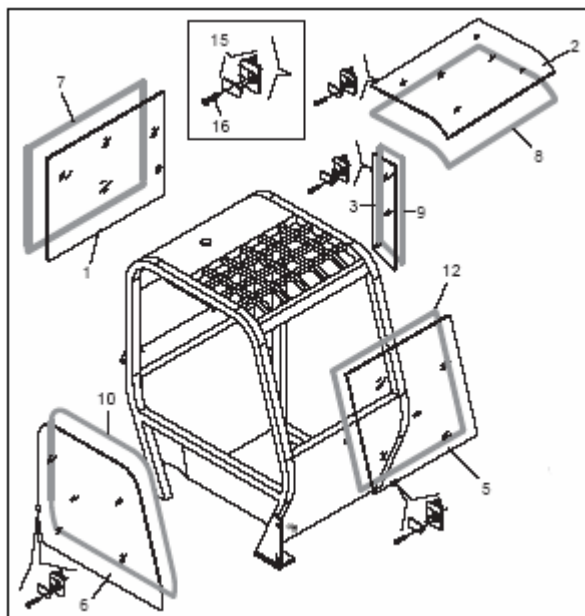
CARD

X	X	B	R	N	V
---	---	---	---	---	---

WIRES

If the basket shouldn't be in the condition of making any kind of movement, invert the wires in the 3rd and 4th position, connected to the five-poled grey plug





New Cab

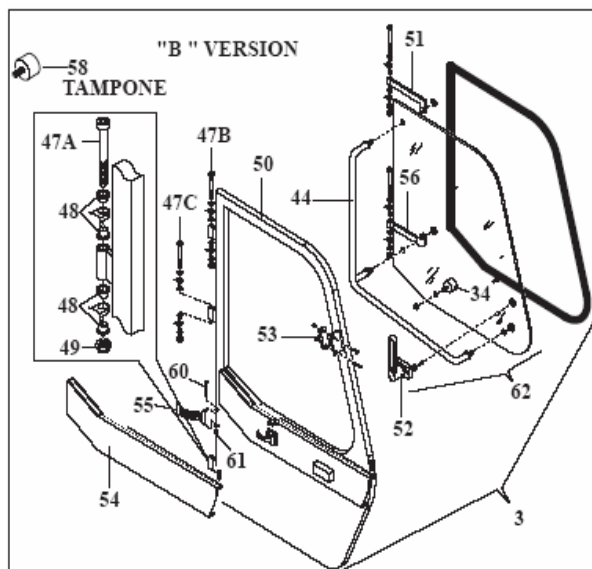
1.3E.47814	£87.00	1.3E.1606006V-A rear window	£67.98
2. 3E.47815	£223.70	2. 3E.1606002V-B open roof glass	£50.99
3. 3E.47816	£44.40	3. 3E.1606004V-B glass behind door	£50.99
5. 3E.47818	£88.78	5. 3E.1606001V-B windscreen	£271.92
6. 3E.47819	£227.24	6. 3E.1606003V-C front right side	£115.19
7. BSC0199	£7.01 p.m.	6. 3E.1606005V-C rear right side	£47.59
8. BSC0199		9. 3E.1606004V-B rear left side	£50.99
10. BSC0199		3E.1606008V-A fixed door glass	£61.19
12. BSC0199		3E.1606007V-C openable door glass	£88.58
15. BSC0157	£3.75		
16. BAE1252	£1.20		

Windscreen Wiper Old Cab

3E.51056 Wiper motor	£129.28	3E.51060 motor	£113..05
3E.51057 wiper arm	£22.51	3E.51061 arm	£47.95
BEQ0111 wiper blade	£9.08	BEQ0112 blade	£15.24

Windscreen wiper New Cab

3E.51052 motor	£113.05	3E.31393 motor	£169.25
3E.51053 arm	£22.51	3E.31394 arm	£84.98
BEQ0111 blade	£9.08	3E.31395 blade	£17.00



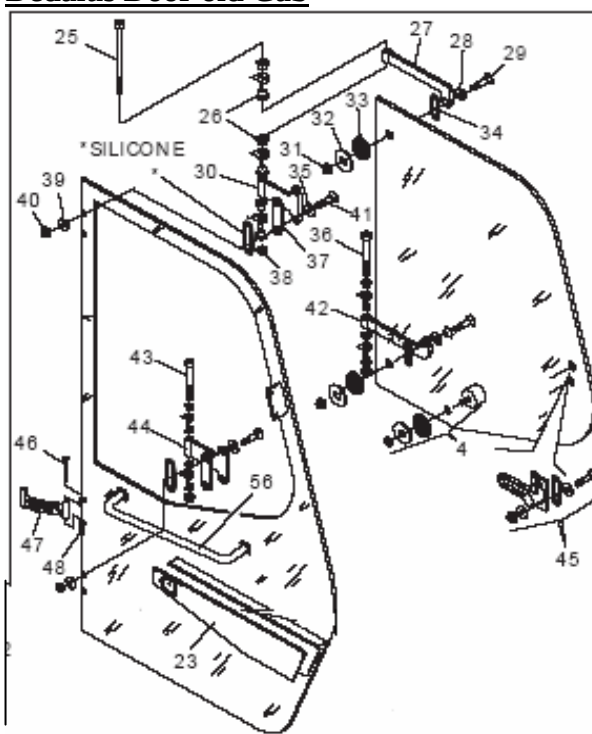
New Cab

Part no	Description	Price
3. 3E.61033	£1295.94	
34. 3E.61012	£71.02	
44. 3E.61037	£50.29	
51. 3E.61038	£19.25	
52. 3E.62019	£31.27	
55. BSC0070	£9.79	
56. 3E.61039	£19.55	
58. BSH9109	£7.58	
3. 3E.31420	complete door	£1607.75
34. 3E.61012	window clasp	£71.02
51. 3E.1606019C	hinge	£33.99
52. 3E.91019	handle	£31.27
55. BSC0070	check strap	£9.79
56. 3E.1606019C	hinge	£33.99
58. BSH9109	stop	£7.58
	Door catch on cab post BSC0159	£12.36

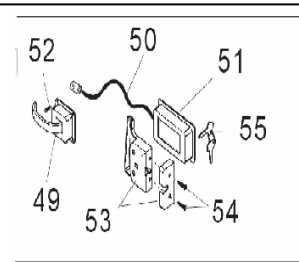
Door Lock

Door Lock			
49. 3E31230	£21.49	50. BWC1104 cable	£2.95
50. BWC1104	£2.95	51. 3E.31336 outer handle	£88.38
51. 3E.61008	£82.87	52. BAE1250 screw	£0.06
52. BAE1250	£0.06	53. 3E31407 inner door lock	£67.98
53. 3E.61007	£62.74	54. BAE3511 screw	£0.10
54. BAE3511	£0.10	55. 3E.31409 door lock key	£5.10
55. BSC0048	£2.95	4C.114014 Ignition key	£6.80
Fuel Key BHG3031	£6.22	BHG3031 Fuel key	£6.27
Door ram BSC0169	£43.22	3E.31225 door ram strut	£40.79

Dedalus Door



3E.61062 Upper door glass	£91.85
3E.1603011V main door glass	£491.54
3E.61061 Main door glass+frame	£683.48
3E.61060 Complete door glass	£1099.48
4. 3E.61012 window clasp	£71.02
27. 3E.61038 upper door hinge	£19.55
30. 3E.61063 main door hinge	£19.61
42. 3E.61039 upper door hinge	£19.55
44. 3E.61063 main door hinge	£19.61
45. 3E.62019 upper door handle	£31.27
47. BSC0070 door strap	£9.79
BSC0169 Door strut ram	£43.22



Apollo cab Glass

New Gas Machine Parts	
Yellow fender BSH0015	£93.96
Forward reverse lever 4C.116107	£288.92
Light switch lever 4C.116088	£247.20
RPM dash Clock 4C.00015138	£305.91
Ignition switch 4C.109058	£84.98
Over load sensor 4C.137031	£339.90
L H tail light 4C.110705	£26.27
R H tail light 4C.110704	£26.27
L H tail light lens 4C.127082	£19.78
R H tail light lens 4C.127081	£19.78
Hand brake cable BWC1672	£66.53

3e.1614001V windsacreen
264.00
3e.1614002v lge door glass
46.20
3e.1614008v sm door glass
38.30
3e.1614009v reare glass 145.20
3e.1614010v left rear glass
46.20
3e.1614011v rt side glass
165.00
3e.1614012v opening door
81.00

P.D.I. Check List

Company name...

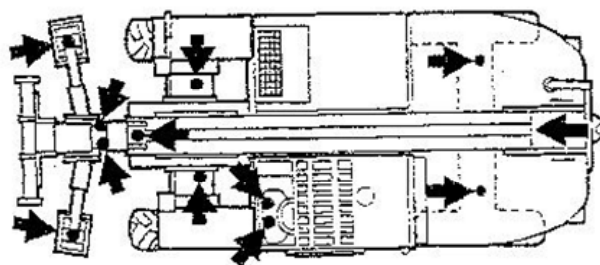
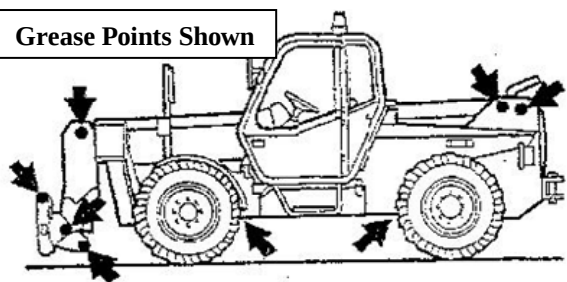
Serial No...

Owners Name...

Model....

Tick all Boxes Checked

Differential oil and reducer oil level		Steering control system – three way	...
Battery Level		Brakes	
Engine water level		Foot throttle	
Engine oil level		Hand throttle	
Brake fluid level		Side shift lever	
Hydraulic oil level		Stabilisers	
Axle and hub oil level		Self levelling device	
Engine belt adjustment		Boom control levers	
Check tightness of boom sliding shoes		Direction Indicators	
Air filter clogged indicator		Parking brake	
Wheel nuts tight		Horn	
Tyre condition		Lights	
Tyre inflation pressure		Wiper front	
Amount of fuel in tank		Wiper rear	
Grease drive shaft		Wiper roof	
Grease extending boom sections		Windscreen washers	
Grease all pins		Screen washers rear and roof	
Grease side shift		Cab door adjustment	
Check tightness of boom sliding shoes		Test drive	
Check tightness of rotation motor Pegasus		Overload indicator tested	
Diesel in tank		Check q attach ram in h/stock	
Tool kit and Handbooks		Beacon	

Grease Points Shown**Additional Extra's**

2 working lights front
2 working lights rear
Radio
Bucket
Forks
Quick attach forks bracket

Pick up hitch
Basket
3.8 ton winch
4.5 metre jib
1.2 metre jib
Remote control
Agri check valve
Spare wheel

Window guards
Shear grab
Block grab
Auto Greaser
Stickers
Basket control
Weld on Brackets

Any Comments....

Mechanics Signature.....Date.....

Checked by Date

**TE mod. S.I.R., Dedalus and Zeus**

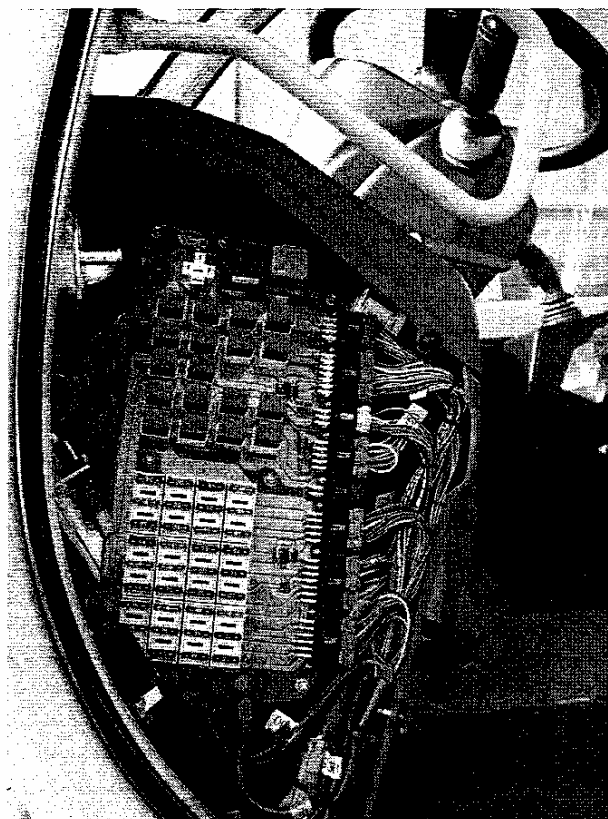
Electric circuit diagrams

FUSE BOX - IDENTIFICATION AND FUNCTIONS OF PARTS

(fig.74/D - fig.74-A/D)

/* °* ^*

1 -	DELAYED TIMER 3" 12V	1
2 -	BASKET START.ANTI-TIP.CTRL UNIT	1
3 -	PCB	1
4 -	DIODES 1N 4007 BLACK	15
5 -	DIODE P 600 M	5
6 -	12V INTERMITTENCE	1
7 -	BUZZER	1
8 -	POWER TERMINAL M6	2
9 -	POWER TERMINAL M5	1
10 -	BOARD RELAY MICRO CONNECTOR	18
11 -	BOARD FUSE BOX CONNECTOR	12
12 -	BOARD RELAY BOX CONNECTOR	3
13 -	PCB CONNECTOR 18 WAY F 90°	1
14 -	PCB CONNECTOR 15 WAY F 90°	2
15 -	PCB CONNECTOR 12 WAY F 90°	1
16 -	PCB CONNECTOR 9 WAY F 90°	1
17 -	PCB CONNECTOR 6 WAY F 90°	1
18 -	PCB CONNECTOR 21 WAY F 90°	2
19 -	MICRO RELAY WITH DIODE 12V	18
F1 -	OUTRIGGERS FUSE 15A	3
F10 -	SWITCH LIGHTING FUSE 7.5A	2
F11 -	LIGHTS AND STOP DEV.SUPPLY FUSE 10A	4
F12 -	SENSORS FUSE 3A	3
F13 -	BOOM HEAD FUSE 7.5	8
F14 -	SIDE LIGHTS FUSE 5A	4
F15 -	SIDE LIGHTS FUSE 5A	4
F16 -	FULL BEAM FUSE 10A	4
F17 -	HORN FUSE 10A	4
F18 -	HEAD LIGHTS FUSE 10A	4
F19 -	FRONT WIPER FUSE 15A	6
F2 -	RADIO FUSE 3A	9
F20 -	REAR WIPER FUSE 15A	6
F21 -	OPTIONAL FUSE 15A	9
F22 -	FRONT WORK LIGHT FUSE 10A	7
F23 -	REAR WORK LIGHT FUSE 10A	7
F24 -	PRE-HEAT.FILTER FUSE 7.5A	8
F25 -	HEATING FAN FUSE 15A	8
F26 -	PARKING BRAKE AND GEAR DEV.FUSE	2
F27 -	ENGINE STOP + SEAT MICRO FUSE	1
F28 -	WARNING FUSE 10A	4
F29 -	BEACON FUSE 7.5A	6
F3 -	BUZZER AND REVERSING LIGHT FUSE 5A	2
F30 -	RADIO FUSE 5A	9
F31 -	OPTIONAL FUSE 10A	9
F32 -	POWER SOCKET FUSE 7.5A	6
F33 -	BASKET SELECTOR FUSE 7.5A	8
F34 -	CONDITIONER FUSE 15A	7
F35 -	BASKET FUSE 15A	1
F36 -	INSTRUMENT SUPPLY FUSE 3A	1
F4 -	SLOW/FAST GEAR SELECTOR FUSE 7.5A	2
F5 -	REAR HYDRAULIC CONNECTOR FUSE 7.5A	9
F6 -	ANTI-TIPPING DEV. FUSE 7.5A	2
F7 -	PNEUMATIC SEAT FUSE 15A	8
F8 -	MECHANICAL GEAR FUSE 5A	4
F9 -	AXLE BLOCK FUSE 10A	2
FA1 -	GENERAL FUSE 80A	1 (IN ENGINE BAY)
FA2 -	STARTER FUSE 40A	1 (IN ENGINE BAY)
FA3 -	THERMAL-STARTER FUSE 30A	1 (IN ENGINE BAY)
FA4 -	ALTERNATOR FUSE 80A	1 (IN ENGINE BAY)



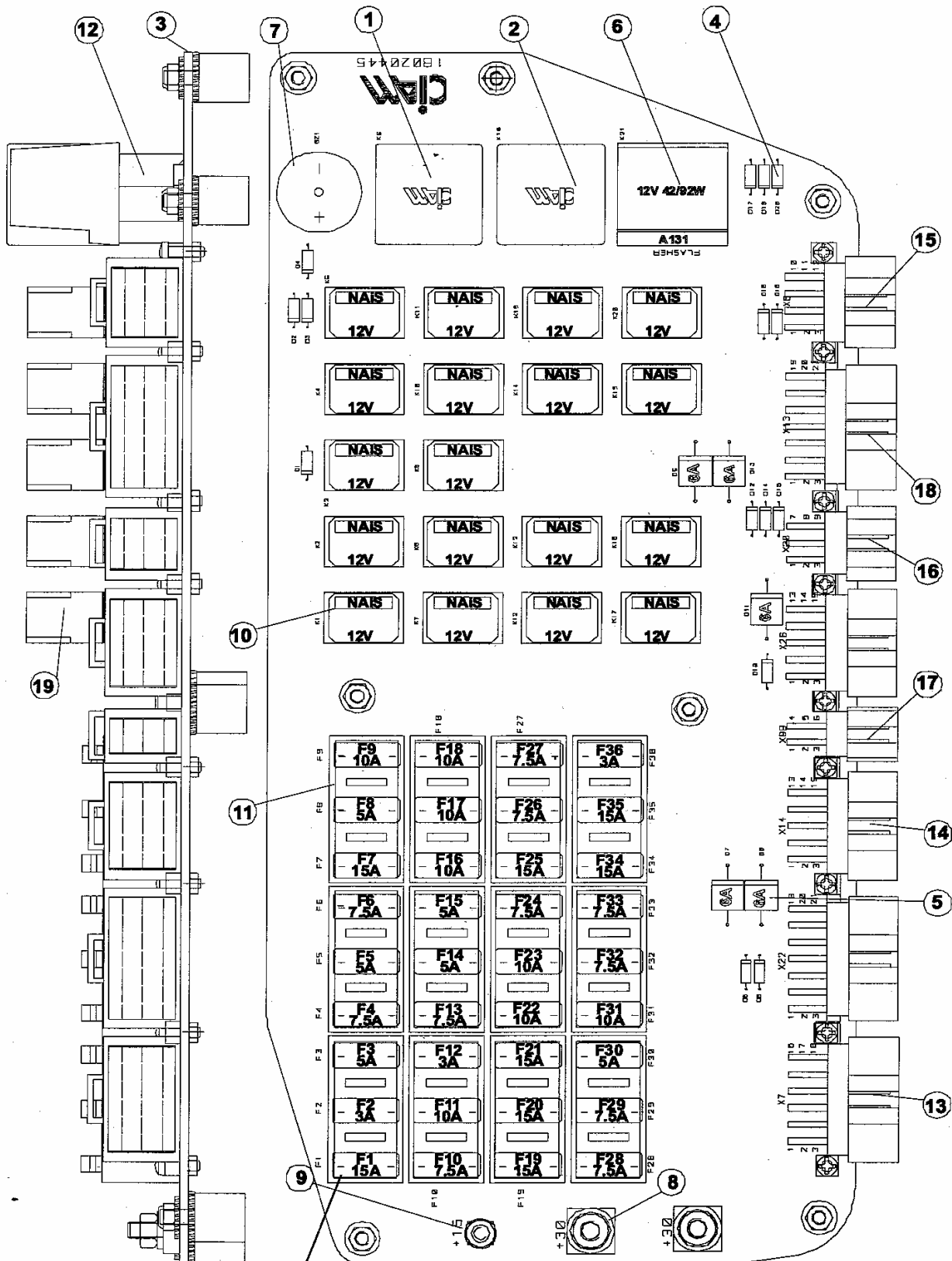
(fig.74/D)

(/*)=POSITOIN REFERENCE

(°*)=DESCRIPTION

(^*)=WIRING DIAGRAM REFERENCE
SHEET

Fuses and relays in New cab Fuse Panel



(fig.74-A/D)

KEY

-F1= IDENTIFICATION OF FUSE POSITION
15/A= AMPERE RATING

Fuse and relay circuits New Cab Dieci

F1	OUTRIGGER FUSE 15A
F2	RADIO FUSE 3A
F3	BUZZER AND REVERSING LIGHT FUSE 5A
F4	SLOW/FAST GEAR SELECT. FUSE 7.5A
F5	REAR HYDRAULIC CONNECTOR FUSE 7.5A
F6	ANTI-TIPPING DEV. FUSE 7.5A
F7	PNEUMATIC SEAT FUSE 15A
F8	MECHANICAL GEAR FUSE 5A
F9	AXLE BLOCK FUSE 10A
F10	SWITCH LIGHTING FUSE 7.5A
F11	LIGHT DEV.AND STOP LIGHTS PWR SUPPLY FUSE 10A
F12	SENSORS FUSE 3A
F13	BOOM HEAD FUSE 7.5A
F14	SIDE LIGHTS FUSE 5A
F15	SIDE LIGHTS FUSE 5A
F16	FULL BEAM FUSE 10A
F17	HORN FUSE 10A
F18	HEAD LIGHTS FUSE 10A
F19	FRONT WIPER FUSE 15A
F20	REAR WIPER FUSE 15A
F21	OPTIONAL FUSE 15A
F22	FRONT WORK LIGHT FUSE 10A
F23	REAR WORK LIGHT FUSE 10A
F24	PRE-HEAT.FILTER FUSE F7.5A
F25	HEATING FAN FUSE 15A
F26	PARKING BRAKE+GEAR DEV. FUSE 7.5A
F27	ENGINE STOP+SEAT MICRO FUSE 7.5A
F28	WARNING FUSE 10A
F29	BEACON FUSE 7.5A
F30	RADIO FUSE 5A
F31	OPTIONAL FUSE 10A
F32	POWER SOCKET FUSE 7.5A
F33	BASKET SELECTOR FUSE 7.5A
F34	CONDITIONER FUSE 15A
F35	BASKET FUSE 15A
F36	INSTRUMENT PWR SUPPLY FUSE 3A
FA1	GENERAL FUSE 80A
FA2	STARTER FUSE 40A
FA3	THERMAL-STARTER FUSE 30A
FA4	ALTERNATOR FUSE 80A
G1	BATTERY
G2	ALTERNATOR
K1	FULL BEAM RELAY
K2	HORN RELAY
K3	TRANSMISSION RELEASE RELAY
K4	BUZZER AND REVERSING LIGHT RELAY
K5	STARTING ENABLING WITH NEUTRAL GEAR RELAY
K6	SEAT MICRO TIMER
K7	HEAD LIGHTS RELAY
K8	DEDALUS ANTI-TIPPING RELAY
K9	FAST HYDRAULIC GEAR RELAY
K10	REVERSE RELAY
K11	STARTING ENABLING FROM CAB WITH OPERATOR SAT DOWN RELAY
K12	DISABLE OUTRIGGERS WITH BASKET INSERTED RELAY
K13	DISABLE OUTRIGGERS FROM OPTIONAL SENSOR RELAY
K14	AUTOAMTIC AXLE BLOCK RELAY
K15	FORWARD GEAR RELAY
K16	ENGINE RUNNING FREQUENCY RELAY
K17	OPTIONAL RELAY
K18	DISABLE OUTRIGGERS FROM EXT./LIFTING SENSOR RELAY
K19	LEVELLING LIMITATION RELAY
K20	MECHANICAL GEARS LED RELAY
K21	INTERMITTENCE

Fuses

F 27 -- fuse for engine stop solenoid, seat micro switch,

(some times if you slide the seat forward it is possible to pull the wires going to seat micro switch causing the switch to come out of its base allowing it to touch the seat frame and blow this F27 fuse)

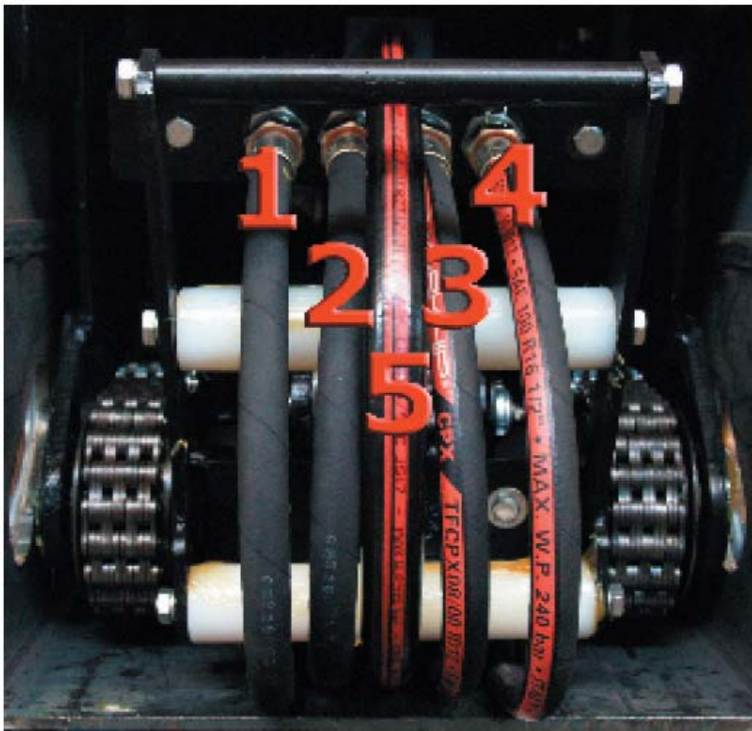


CEMENT MIXER TRUCKS SERIES 2005

HYDRAULIC COMPONENTS [PRESSURE ADJUSTMENTS]	N 2400		L 3500		L 4700		F 7000	
	MIN [bar]	MAX [bar]	MIN [bar]	MAX [bar]	MIN [bar]	MAX [bar]	MIN [bar]	MAX [bar]
Loading tank and utilities control valve	170 ÷ 180		170 ÷ 180		170 ÷ 180		170 ÷ 180	
Calibration pressure of the anti-collision valve on tank control valve unit [DOWN]	80		80		80		80	
Calibration pressure of the anti-collision valve on tank control valve unit [UP]	170		170		170		170	
Drum rotation circuit pressure	170 ÷ 190		170 ÷ 190		250		250	
Hydrostatic pump high pressure circuit	420 ÷ 430		420 ÷ 430		420 ÷ 430		420 ÷ 430	
Hydrostatic pump/engine displacement gear	220 ~		220 ~		220 ~		220 ~	
Hydrostatic pump boost pressure	24 ÷ 27		24 ÷ 27		24 ÷ 27		24 ÷ 27	
Inching circuit pressure	5 ÷ 24		5 ÷ 24		5 ÷ 24		5 ÷ 24	
Power steering circuit pressure	165 ÷ 170		165 ÷ 170		165 ÷ 170		165 ÷ 170	
Supply pressure of gear change solenoid valve	24 ÷ 27		24 ÷ 27		24 ÷ 27		24 ÷ 27	
Supply pressure of negative brake solenoid valve	24 ÷ 27		24 ÷ 27		24 ÷ 27		24 ÷ 27	
Supply pressure of servo brake circuit							24 ÷ 27	
Water cleaner pump pressure	(*) 110 ÷ 120		(*) 110 ÷ 120		(*) 110 ÷ 120		(*) 110 ÷ 120	

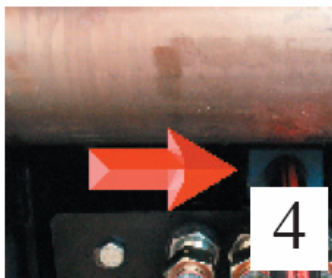
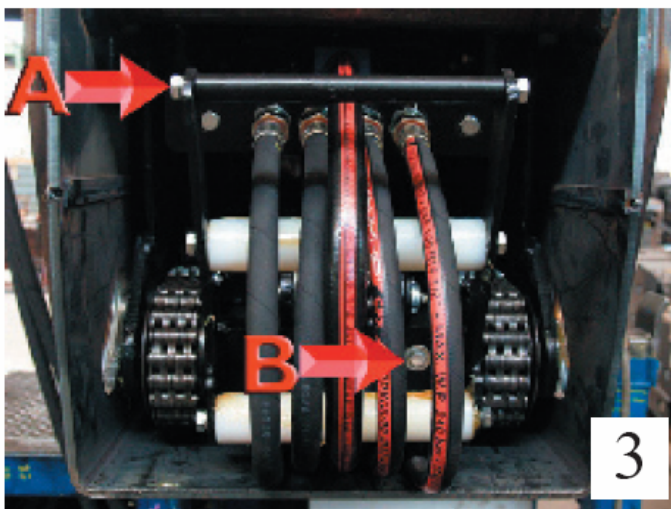
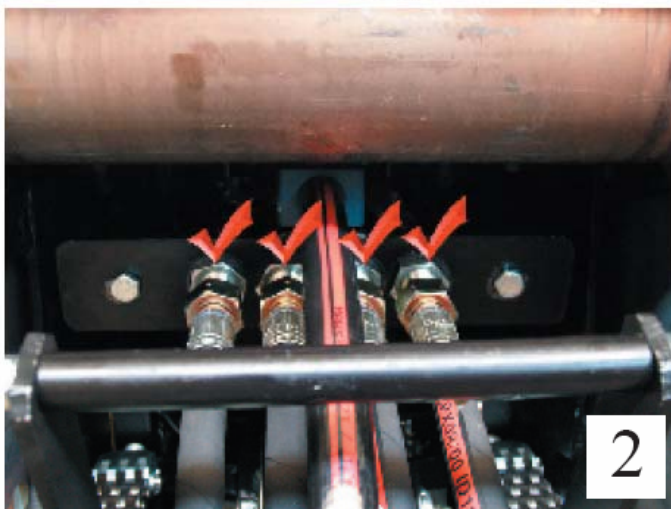
To Change the pipes in a 4 part boom with chains

KEY OF THE POSITIONS-FUNCTIONS OF THE PIPES

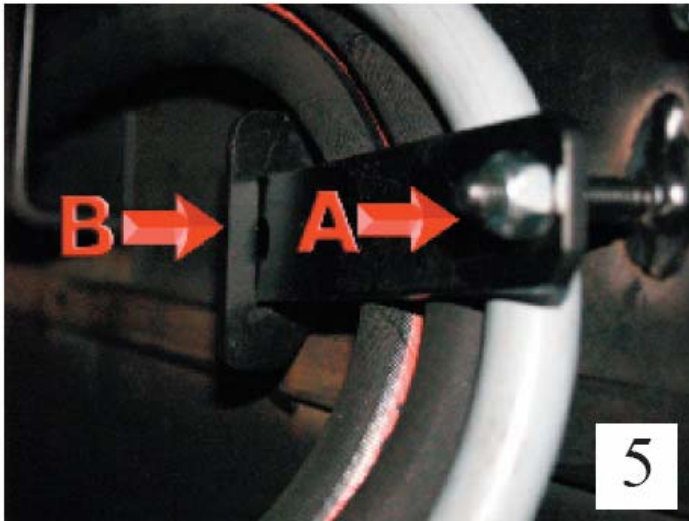


- | | |
|---|------------------|
| 1 | OSCILLATION |
| 2 | OSCILLATION |
| 3 | UTILITIES |
| 4 | UTILITIES |
| 5 | ELECTRICAL CABLE |

- | |
|----------------------------|
| (TOP) |
| (BOTTOM) |
| (TOP) |
| (BOTTOM) |
| (boom head-Electric panel) |



- 1) Retract and completely lower the boom.
- 2) Remove the rear casing (photo 1).
- 3) Disconnect the four pipes connected to the unions of the terminal plate (photo 2) at the back of the boom.
- 4) Remove the pipe guide support by unscrewing the screws that secure the top bar (A) and the screws that secure the bottom part (B) photo 3. This will enable you to access the brackets fastening the hydraulic pipes and the electrical cable on the RH and LH side of the internal boom extension.
- 5) Remove the clamp fastening the electrical cable sheath on the pipe support (photo 4).
- 6) Dismantle the pipe support by unscrewing the two screws at the side.



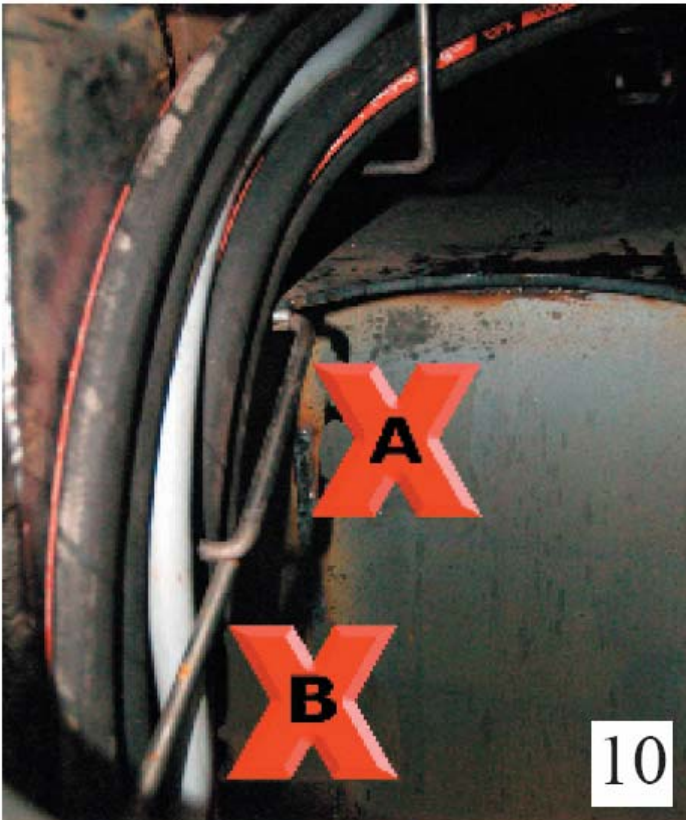
7) Partially dismantle the side brackets that block the pipes and the electrical cable fitted on the RH and LH side of the 3rd internal boom extension; when doing this job, just unscrew the nut in position A and just loosen the nut in position B (photo 5); in some cases, the nut in position B is replaced by a slot welded to the boom extension wall.

8) You now need to work on the boom front (photo 6_7), removing the small casing on the front of the boom (photo 8).



9) Disconnect the pipe/s to be replaced (photo 6_7) and the electrical cable from the side socket on the boom wall (pos. A photo 9), mark the end unions of the hydraulic pipes and the attachment position to facilitate re-assembly if they are just partially replaced.





10) Slide the pipe/s and the electrical cable out from the side guides inside the boom head (pos. A and B photo 10) and pull them out from the hole at the front (photo 11).

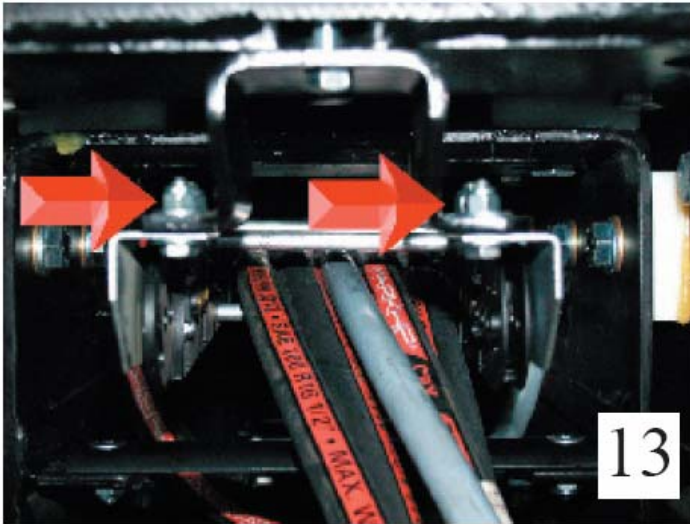


11) Tie some small ropes measuring at least 15 meters to the terminals of the pipes and the electrical cable; this will enable you to recover the pipes and the electrical cable once they have been replaced.

12) Go back to the back of the boom and start to slide out the pipes and electrical cable from the top RH and LH side guides of the 3rd internal boom extension (photo 12).

13) Pull the pipes and the electrical cable out from the back of the boom.



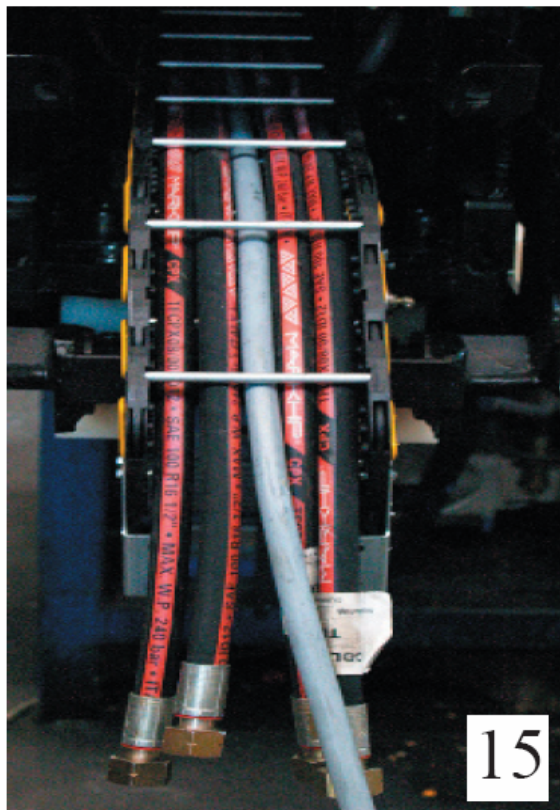


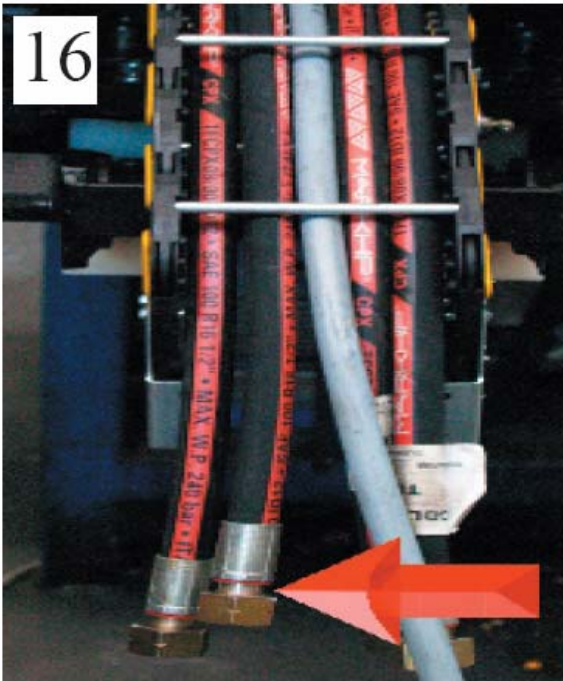
14) Remove the four screws (diameter 6) fastening the terminal of the chain to the top bracket of the 2nd boom extension (photo 13).



15) Disconnect the pipes from the terminal plate (photo 14); in the case of partial replacement, just disconnect the pipe/s to be replaced (consult the key references).

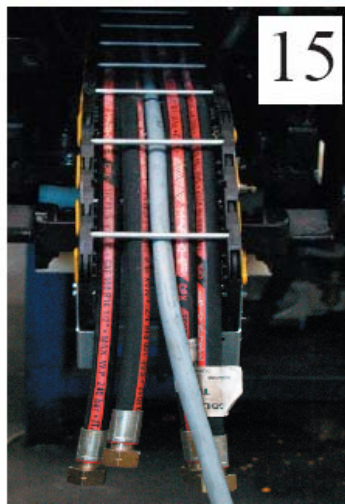
16) Pull the electrical cable a few meters out of the top RH guide, run it inside the chain to be able to extract the top part of the same (photo 15); this will make it easier to insert the new pipe/s to be replaced.





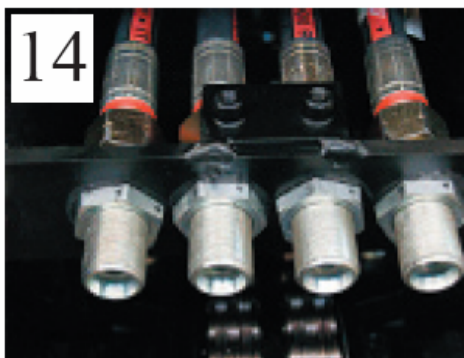
17) Tie some small ropes measuring at least 7/8 metres to the terminals (pointed out by the arrow) of the pipe unions.

18) Pull the pipe/s to be replaced from the bottom terminal of the chain still secured to the internal boom extension.

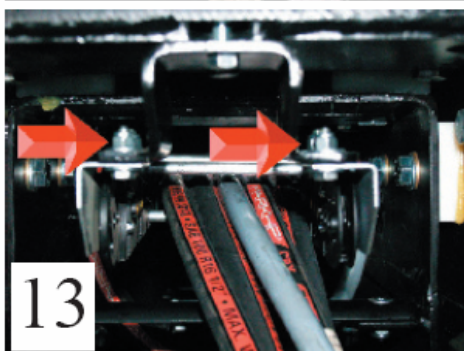


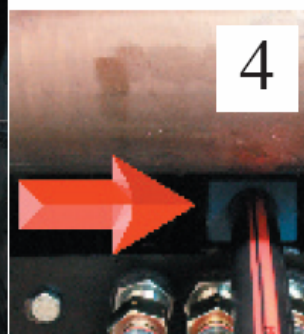
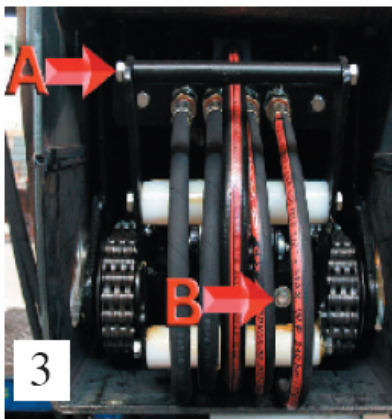
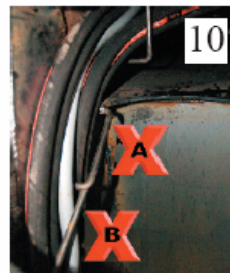
19) Remove the small ropes that come out with the pipes from the chain of the bottom part and tie them to the new pipe/s to be replaced and follow the instructions in reverse order (pull the rope tied to the terminal of the pipe from the top part of the terminal of the chain). Before you do this, mark the terminal of the new pipe/s to make it easier to connect them in their dedicated positions.

20) Feed the pipe/s out from the top part of the chain at the original distance (photo 15), take the small ropes off the pipe terminals and secure the unions to the support (photo 14).



21) Insert the chain with the pipes and the cable inside the boom and secure the top chain terminal to its support (photo 13).





22) Take the small ropes off the terminal of the pipe/s previously dismantled from the boom head (photo 6_7) and tie the terminals of the new pipe/s and electrical cable.

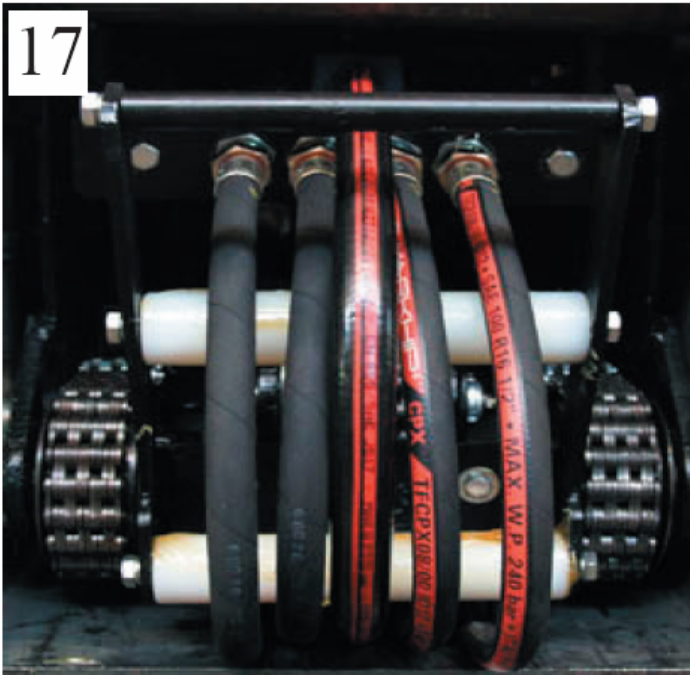
23) Move to the front of the boom and start pulling the small ropes to insert the new pipe/s and the electrical cable inside the internal side guides (photo 12).

24) Feed the pipe/s out from the front part of the boom.

25) Move to the back part of the boom and secure the pipes and the electrical cable behind the RH and LH brackets (photo 5), block the brackets on the internal wall as per original condition.

26) Go back to the front part of the boom and feed the pipes and the electrical cable in the internal guides (pos.A and B photo 10) and secure the pipes in their dedicated positions (see key).

27) Now work from the back part of the boom and fit the pipe guide support (photo 3) and the terminal fastening the sheath of the electrical cable (photo 4).



28) Connect the bottom pipes to the terminal block and make sure they are aligned (photo 17) and also check the bending radius (photo 18).

29) Upon completion, extend the boom slowly and check if the pipes and the electrical cable sheath run smoothly.

30) Test: the pipes and the sheath of the electrical cable must run in line and vertically, they must not touch each other, the walls of the boom or the pipe guide.



31) If one or more pipes do not run perfectly in line, loosen the unions from the terminal plate and tighten them again with the new twist.

32) Once you have checked that everything works properly, grease the pipes and the tracks along which they run with plenty of grease to avoid friction and abrasion.

Icarus 38-14m internal Pipes

Part number BKK0998 x 4 pipes inside the boom all these are the same. 2 go to the tilt ram from the steel pipes on the under side of main boom. 2 go to auxiliary fittings on headstock from the steel pipes on the under side of main boom.

To remove these pipes:

1. Boom down horizontal and fully retracted.
2. Remove rear cover to expose inside of boom area
3. Loosen pipe or pipes to be replaced at under side of main boom attach a rope to each of these for drawing the new pipes back in.
4. Pull the pipe or pipes out the rear and unattach the rope leaving it in the boom
5. At the front remove the inspection plate from the headstock giving access to the top of the tilt ram.
6. Unscrew pipe or pipes to be replaced and attach a rope to each pipe as these need to be removed one at a time. These pipes are held in the boom by a channel down each side of the boom 2 pipes in one side and 2 pipes and an electric cable in the other
7. Remove pipe via the rear, guiding the front end with rope into the channel at the front of the boom.
8. Replace the new pipes in reverse order.

The pipes themselves are of the following dimensions

Length – 35 ft 6 inches, not counting end fittings.

90 degree BSP ½ inch female fitting on one end

90 degree metric 24 female fitting on the other end

Both fittings facing the same direction.

Icarus 16m Boom Pipes, Part no. BKY1998

On the 16m there is a cage system in the boom to keep the pipes together. If you want to replace one pipe you have to remove all the pipes and electric cable in one piece. The lower section of the pipe work from the steel pipes on the outside front section of main boom can be replaced separately from the section inside the inner boom.

To remove pipes from lower part of boom

1. Lower the boom and retract the boom in fully
2. Remove cover of the rear end to expose the inside of boom.
3. Unscrew pipes from steel pipes on the front under side of main boom section
4. Attach ropes to the pipes to be removed (on this section you can remove one pipe as needed)
5. Loosen the roller at the rear and remove out of way
6. Unscrew the pipes at the rear and pull out the rear feeding the rope though as you go
7. Replace new pipes in reverse order.

To replace pipes in the inner section

1. Lower the boom and retract the boom in fully
2. Remove cover of the rear end to expose the inside of boom.
3. Remove inspection plate from the front headstock.
4. Unscrew the pipes from the auxiliary fitting and the tilt ram (it may be necessary to take the pin from the top of tilt ram to let it drop down for ease of access).
5. Disconnect the electric wire from the front head stock
6. Attach ropes to the pipes and electric cable. (To be used for pulling in the new pipes and cable)
7. At the rear remove roller system and disconnect pipes
8. Remove four 6mm bolts from lower mounting bracket of cage
9. Remove side retaining brackets that hold pipes
10. Remove two 8mm studs and nuts that hold upper mounting bracket of cage
11. Remove the pipes and electric cable from the top first. (It will be necessary to push the lower part back in off the step it is mounted on to get it out)
12. Pull the remaining part of pipes and cable out feeding rope through as you do so (to change the electric cable it will be necessary to disconnect from control box)
13. Replace pipes in reverse order

The pipes themselves have the following dimensions

Length – 33ft. 6 inches, not counting the fitting ends

90 degree BSP ½ inch female fitting on one end

Straight metric 24 female fitting on other end

Dieci Hyd Hose details

BKX0998 14m internal boom hose

Length – 35 ft 6 inches, not counting end fittings. (2LW hose 21mm dia.)

90 degree BSP ½ inch female fitting on one end

90 degree metric 24 female fitting on the other end

Both fittings facing the same direction.

BKY1998 16m internal boom hose

Length – 33ft. 6inches, not counting the fitting ends (2LW hose 21mm dia.)

90 degree BSP ½ inch female fitting on one end

Straight metric 24 female fitting on other end

BKX0987 8m internal boom hose

Length – 8700mm not counting fitting ends (2LW hose 21mm dia.)

90 degree BSP ½ inch female fitting on one end

90 degree metric 24 female DLM fitting on the other end

Both fittings facing the same direction.

BKY1986 Zeus 35-10 internal boom hose

hose 1/2 2LW ext dia= 21mm L= 8700mm

½ inch female BSP 90 degree on one end

24 metric female straight on other end

BKY1992 17m Icarus 34 ft 10inches 24m st - ½ bsp 90 degree

BKY1987 26ft 2 inches 24m st - ½ bsp 90 degree

BKY1986 28ft 7 inches 24m st - ½ bsp 90 degree

BKY1995 37 ft 0 inches 24m st - ½ bsp 90 degree

BKY1994 40ft 6 inches 24m st - ½ bsp 90 degree

Main Transmission hoses Dedalus 26-6

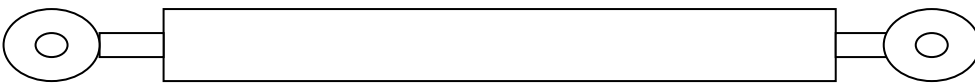
Long hose part number BLF6155/66

4 wire ¾ hose WP420 bar (hose length not counting ends) 150cm

Clamp type ends with 90 degree bends on both, facing the same direction

1st end 1 5/8 inches (41mm) across the diameter of fitting face, with o ring inserted

2nd end 1 7/8 inches (48mm) across the diameter of fitting face, with o ring inserted

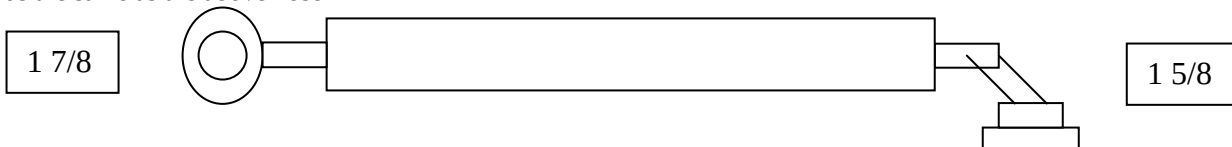


Short hose part number BLF6085/54

4 wire ¾ hose WP420 bar (hose length not counting ends) 73cm

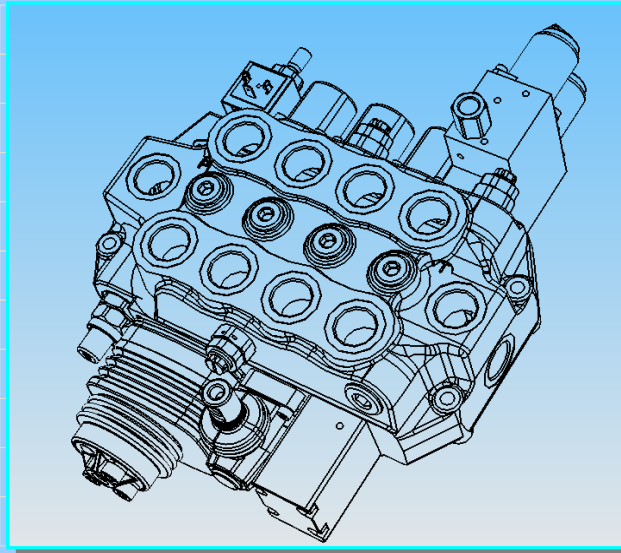
Clamp type ends with 90 degree bends on both, facing off set by 90 degrees one from the other

Ends the same as the above hose



Walvoil products training

WALVOIL PER DIECI s.r.l.



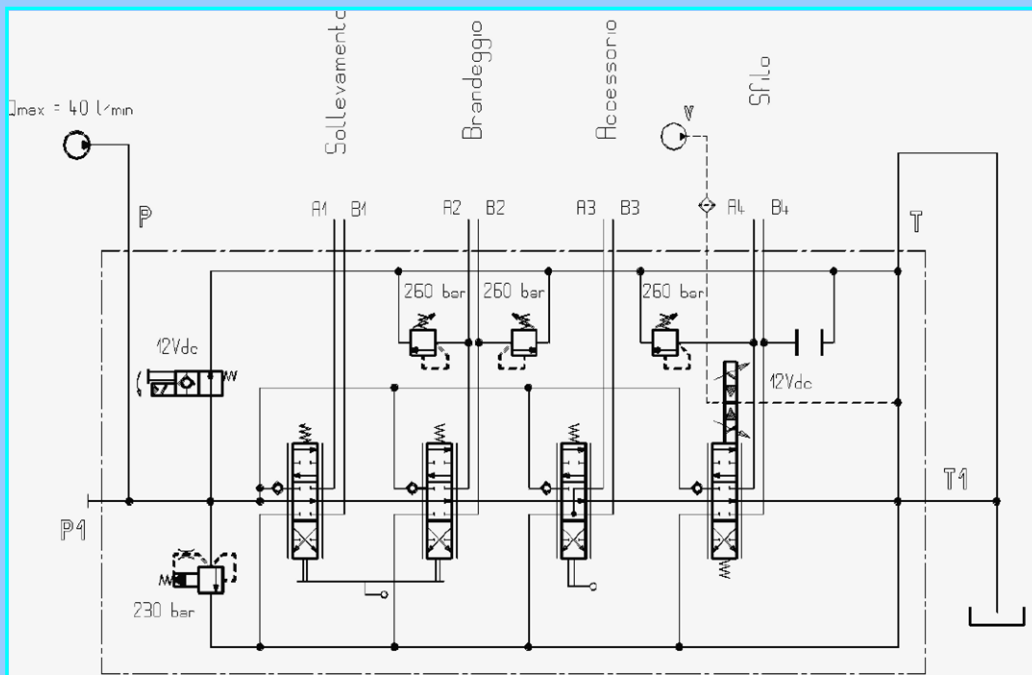
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Walvoil products training

DIECI s.r.l.

Schema idraulico

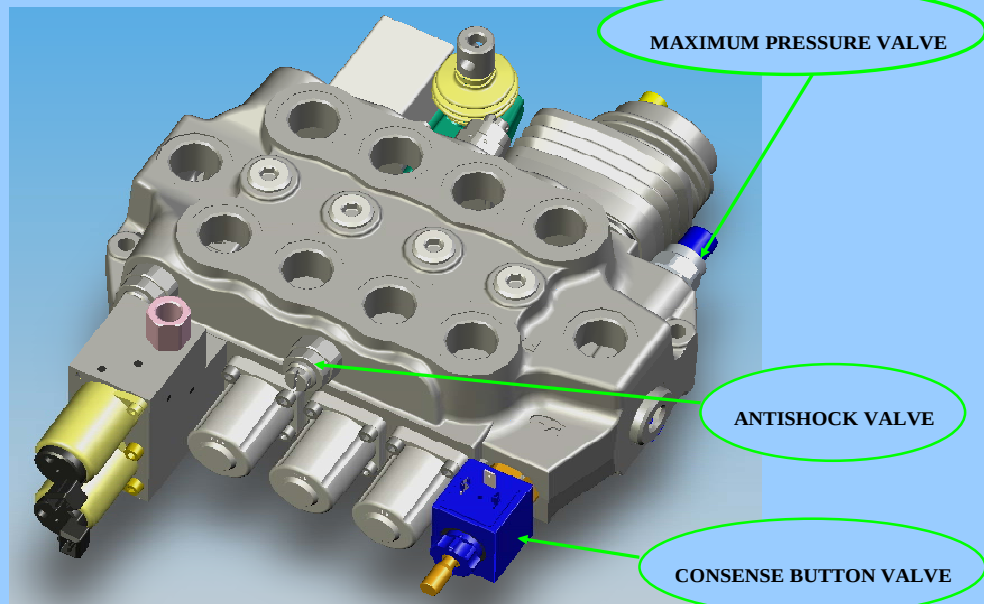


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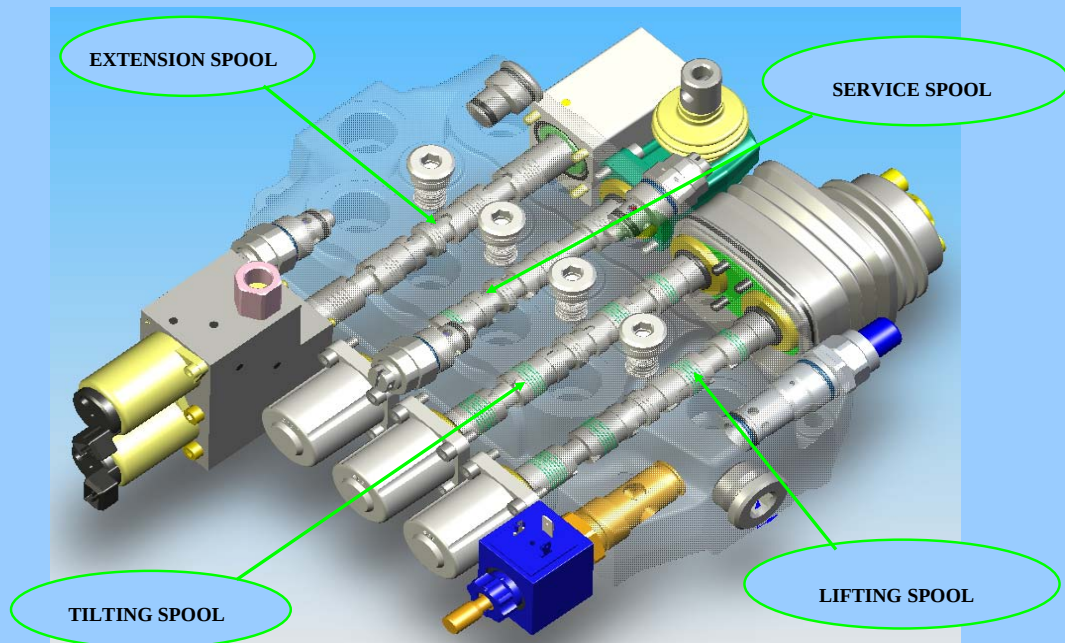
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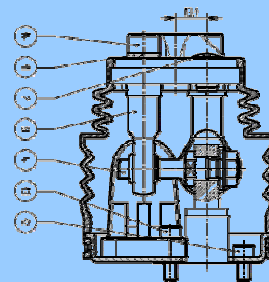
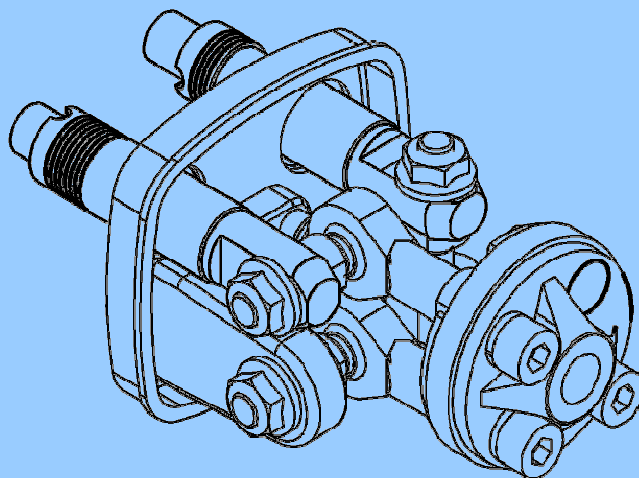
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Cloche L.C.B.

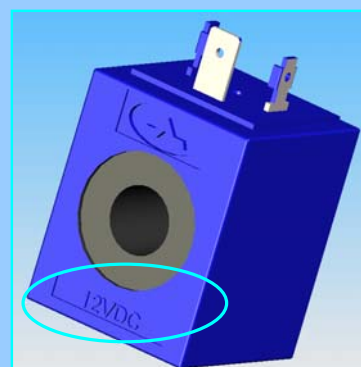


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Consense button valve



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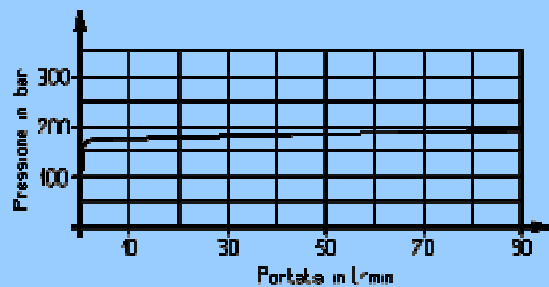
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Maximum pressure valve



Diagramma Pressione-Portata



Simbolo	
Portata nominale	90 l/min
Taratura con Q = 10 l/min	175 $\pm$ 5 bar
Fuga interna	max 30 cm ³ /min a 100 bar
Pressione max. su P	315 bar ISO-2944
Contropressione max. su T	25 bar
Pico di apertura	4 $\pm$ 0.5 bar a 10 l/min e 120 bar
Incremento di pressione	0.3 bar/l
Tempo di risposta	0.2 sec
Fluido	Olio minerale
Viscosità	12 $\pm$ 400 mm ² /s
Guarnizioni	Viton
Temperatura fluido	da -20° a +100° C
Contaminazione ammessa	19/16 ISO-4406
Cavità (Walvol N054)	13+
Ch 27 mm	Coppia serraggio 42 Nm
Dati rilevati con olio a 40° C e viscosità 46 mm ² /s	

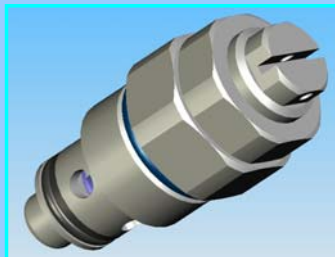
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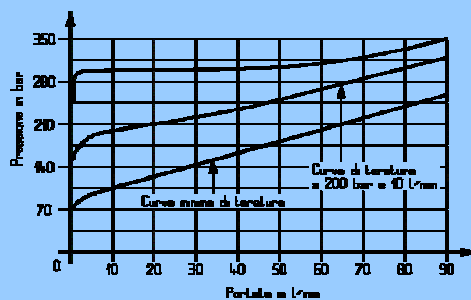


Antishock valve



Curve caratteristica in funzione della portata :

[SdC N° 454]



Simbolo	
Portata nominale	60 l/min
Taratura con Q = 10 l/min	200 $\pm$ 5 bar
Campo di regolazione su P	180 $\pm$ 350 bar
Fuga interna	max. 3 cm ³ /min a 100 bar
Contropressione max. su T	25 bar
Fluido	Olio minerale
Viscosità	12 $\pm$ 400 mm ² /s
Guarnizioni	Viton
Temperatura fluido	da -20° a +100° C
Contaminazione ammessa	19/16 ISO-4406
Cavità (Walvol N054)	5
Ch 24 mm	Coppia serraggio 42 Nm
Dati rilevati con olio a 40° C e viscosità 46 mm ² /s	

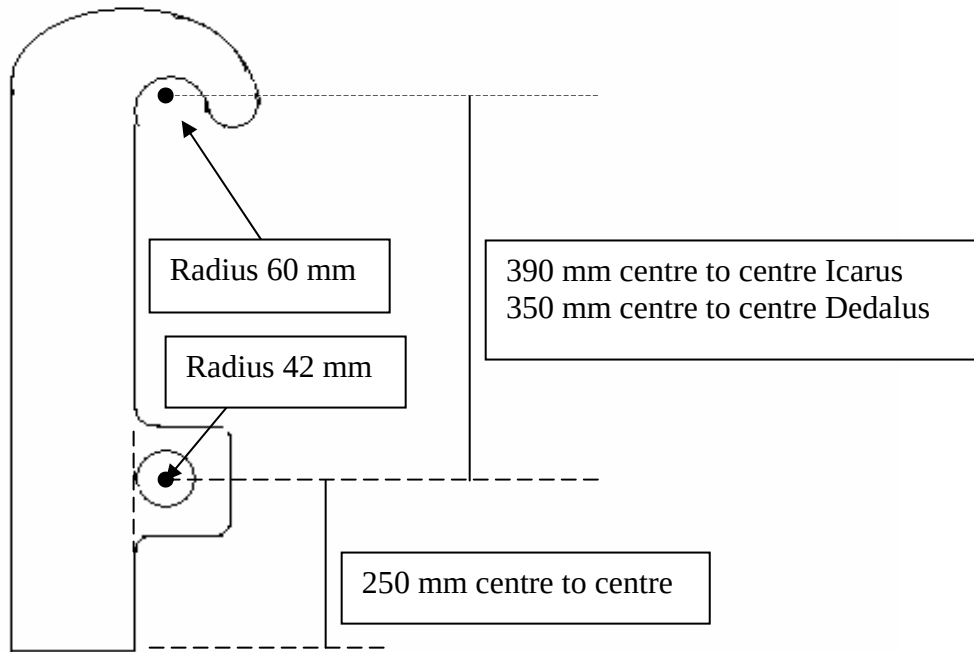
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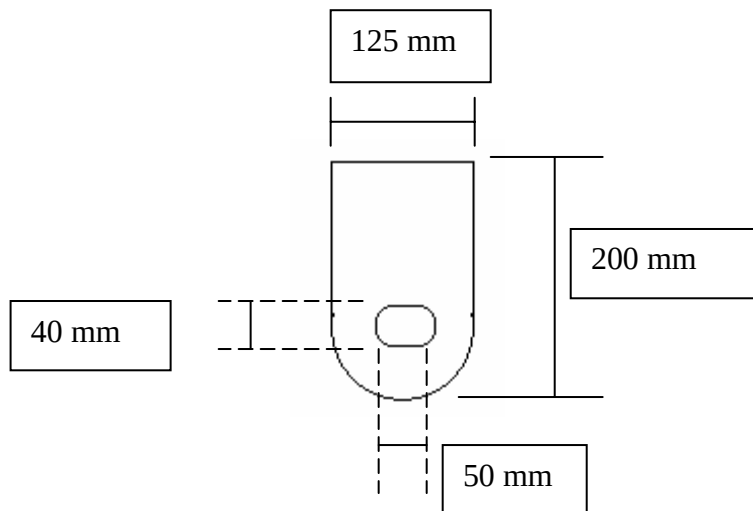
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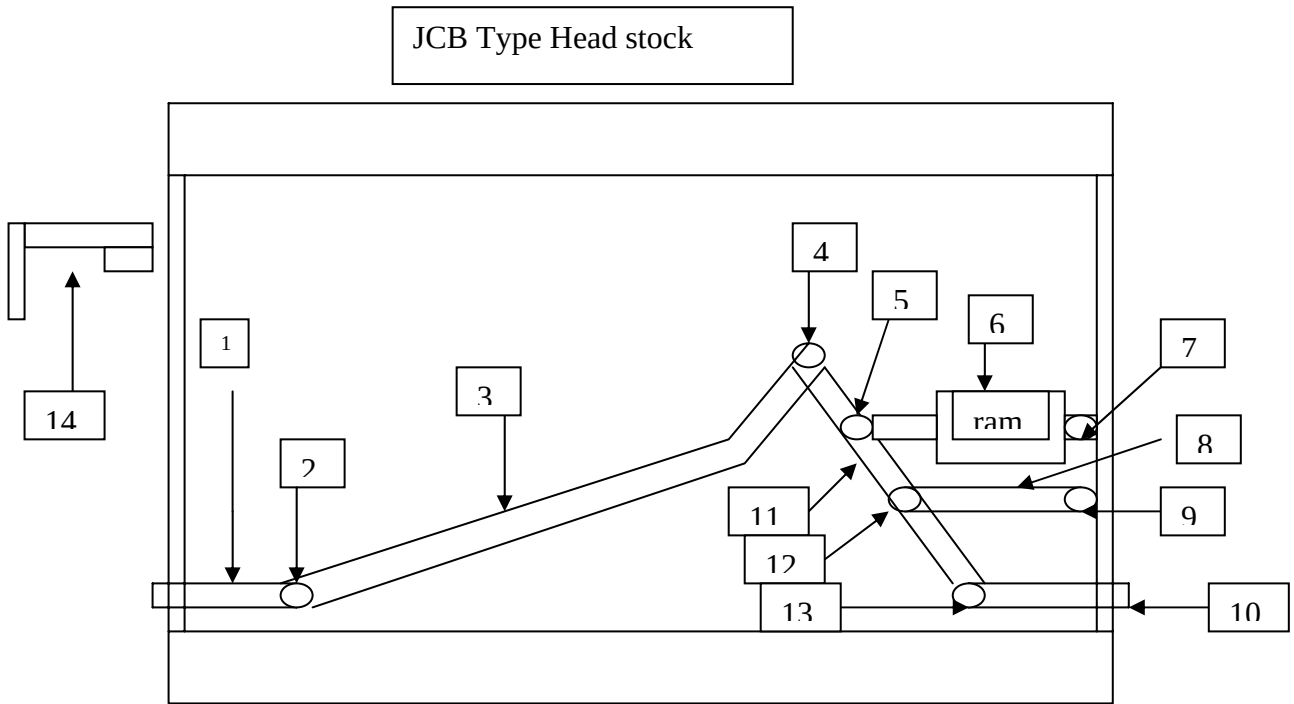


Dieci Weld on Bracket



Tongue for locking on implement

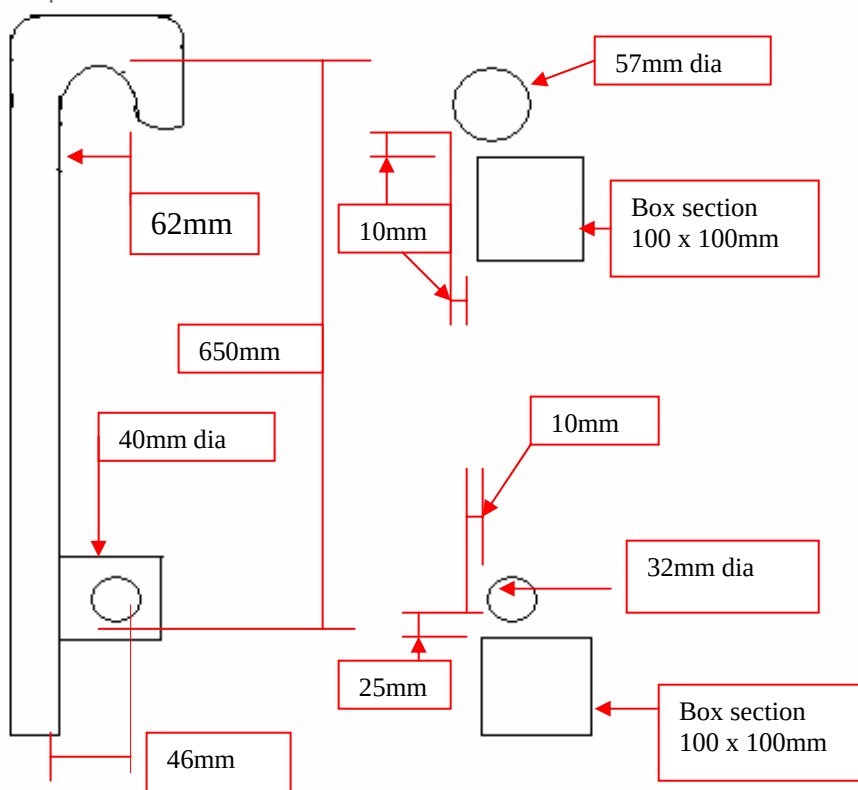




6. JCB ram BHM0105 single rod

6. JCB ram BHM0035 with double rod

JCB Weld on bracket



Dieci Ltd

245 ARMAGH RD, NEWRY, CO. DOWN, NORTHERN IRELAND, BT35 6NL TEL 02830 821230 FAX 02830 821583
MOBILE: 07860 617616 E-MAIL: alan@dieci.org UK OFFICE NICK SHEARD: TEL 01262 420261
MOBILE: 077939 224092 E-MAIL: nick@dieci.org

16-03-04

Service Bulletin No 001

Ref: - Service schedules

We would like to stress the importance of regular servicing. In particular oil changes. It has come to our attention that some machines are not getting oil changes in accordance to service schedules.

We would ask that you rigorously follow the service schedule, which recommends hydraulic oil changes every 1000 hours. We would ask you to inform the relevant departments in your business of this matter.

Though the problem of lack of oil changes has not arisen within the warranty period it will shorten the expected life of transmission pumps, hydraulic pumps, motors etc. considerably, thus occurring cost to the owners that could be avoided.

High Temperatures and high pressures (230 bar for hydraulics and 450 bar in the transmission) lead to the oil having to work at a premium even with 130 litres in the smaller machines to 280 litres in the larger machines. As Dieci use a mineral based oil we would also like to stress the importance of using Mineral based oil. **Under no circumstances use a synthetic oil as this will do damage.** Oil working under these conditions will lose its viscosity and additives over a period of time and though oil is there is quantity if it is not there in quality it cannot do the many tasks asked of it in to-days machine.

A copy of the service schedule is enclosed.

If we can be of any further assistance please do not hesitate to call

Best Regards

Houston Milne
Service Manager
Dieci Ltd.

dDIECI Ltd

SERVICE DEPARTMENT 245 ARMAGH RD, NEWRY, CO DOWN, NOTHERN IRELAND, BT35 6NL
TEL: 02830 821230 FAX: 02830 821583 MOBILE : 07860 617616 E-MAIL: alan@dieci.org

17-03-04

Service Bulletin No 002

Ref: - Pegasus turret rotation motor.

In the service schedule for the Pegasus model we recommend that you include in the various checks section. 'Check turret rotation motor bolts' as there has been an incident of these bolts either been loose from the factory or have come loose during operating. It would also be good practice to incorporate this check in P.D.I. procedure.

Best Regards

Houston Milne
Service Manager
Dieci Ltd.

dDIECI Ltd

SERVICE DEPARTMENT 245 ARMAGH RD, NEWRY, CO DOWN, NOTHERN IRELAND, BT35 6NL
TEL: 02830 821230 FAX: 02830 821583 MOBILE : 07860 617616 E-MAIL: alan@dieci.org

17-05-05

Service Bulletin No 003

Dedalus Teleporters (serial numbers starting with 131....)

The hydraulic pressure on these machines should be checked to make sure they are not exceeding the prescribed setting of 180 bar.

A higher setting could lead to excessive engine wear shortening the life of the engine.

This bulletin covers all the old cab Dedalus's no other model is affected.

Please make arrangements to check the maximum hydraulic pressure on all old cab Dedalus teleporters. The correct pressure can be checked by taking a reading with the appropriate test clock plugged into the auxiliary fitting on the front of the boom.

Best Regards

Houston Milne
Service Manager
Dieci Ltd.

dDIECI Ltd

SERVICE DEPARTMENT 245 ARMAGH RD, NEWRY, CO DOWN, NOTHERN IRELAND, BT35 6NL
TEL: 02830 821230 FAX: 02830 821583 MOBILE : 07860 617616 E-MAIL: alan@dieci.org

8/1/07

Service Bulletin No 004

Pegasus (all models)

Up grade of service schedule

On regular service schedule, add to each visit the following.

Check and replace, as necessary, the crystals bag in the electrical section of the rotation turret.

This bag can be found by lifting up boom and removing plate in the centre directly over the rotating axis. Remove the doom shaped cover to reveal the electric contacts. The crystals bag can be found in the bottom of this section.

Check if bag is dry and pliable, in this case all is well.

If the bag is hard, discoloured or damp it needs replacing

Also check for any corrosion on the contacts, clean as needed.

Best Regards

Houston Milne
Service Manager
Dieci Ltd.

dDIECI Ltd

SERVICE DEPARTMENT 245 ARMAGH RD, NEWRY, CO DOWN, NORTHERN IRELAND, BT35 6NL
TEL: 02830 821230 FAX: 02830 821583 MOBILE : 07860 617616 E-MAIL: alan@dieci.org

2/4/07

Service Bulletin No 005

40 km rd speed Machines all models.

Caution on Road Travel

All customers should be notified immediately, of the following information. fully

Machines with 40km ability

It has come our attention that some operators are allowing their machines to over speed beyond the 40km limit & maximum 2500 RPM .

We would like to reiterate the importance of keeping the machine within the legal & safe travelling speed. There is a danger that the machine may suffer severe mechanical damage & or personal injury to driver or others, by driving and exceeding the machines maximum road speed of 40km or maximum engine revs of 2500rpm. This can only happen by operating the machine incorrectly, allowing the machine speed to go above the max rpm engine speed as indicated by rev indicator on dash.

Special precautions must be taken when driving down hill, where the machine can gain more speed or more rpm's on the engine . Drivers must be aware that precautions are to be taken / example ,Pegasus 21m weight unladen is 17,000Kg,s ,Which will propel & exceletrate the vehicle when driving down hills ,The same applies to towing ladin trailers allowing for the extra weight when travelling down hills In these case,s

It is necessary to limit the engine rpm to 2000 rpm while travelling down hill.

If the driver is in any doubt of this, and to prevent over speed going down a steep hill or long slope he must use a lower gear.

It is the responsibility of the owner to insure that only licensed & fully qualified drivers may operate this equipment

Best Regards

Houston Milne
Service Manager
Dieci Ltd.

dDIECI Ltd

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TEL: 02830 821230 FAX: 02830 821583 MOBILE : 07860 617616 E-MAIL: alan@dieci.org

2/4/07

Service Bulletin No 006

To the Dieci service and warranty department of all depots

All warranty issues relating to tyres fitted to Dieci machines are handled directly by the Tyre manufacturer. Mitas are the preferred supplier to Dieci. Should you wish to discuss any tyre issues the manufacturer can be contacted directly on Tel no 01553817740

The tyre manufacturers or Dieci will not be responsible for damage due to tyres being used

1. under inflated
2. over inflated
3. wheels out of line.
4. cuts or tares
- 5.

Please be aware that machines will come from the factory with tyres at an over inflated pressure, for transport reasons only.

During the initial PDI and subsequent servicing all tyres should be inspected for correct pressure for working conditions and wheel alignment checked.

To check the correct alignment of the wheels and tyres the following measurement must be obtained. inside front rim to rim and inside rear rim to rim are equal.

Houston Milne
Service Manager
Dieci Ltd